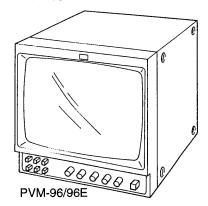
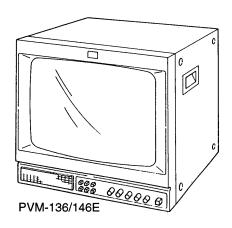
# PVM-96/96E/136/146E

# **SERVICE MANUAL**

**REVISED-1** 





US Model Canadian Model PVM-96/136 AEP Model PVM-96E/146E

## **SPECIFICATIONS**

Video signal

Resolution

PVM-96/96E: 900 TV lines PVM-136/146E: 1000 TV lines Frequency response 10.0 MHz (Less than -3.0 dB)

Picture performance

Normal scan

8% overscan of CRT effective

screen area

Underscan (PVM-96/96E, PVM-136/146E only)

3% underscan of CRT effective screen

H. linearity V. linearity Less than 8.0% (typical) Less than 7.0% (typical)

Color temperature 6500K

Inputs and Outputs

Inputs

VIDEO IN (LINE A, LINE B): BNC connectors, 1Vp-p, sync negative AUDIO IN (LINE A, LINE B): phono jacks

EXT SYNC: BNC connector, 4 Vp-p.

sync negative

Loop-through outputs

VIDEO OUT (LINE A, LINE B): BNC connectors, 75 ohms terminated AUDIO OUT (LINE A, LINE B): phono

iacks

EXT SYNC: BNC connector, 75 ohms

terminated

Remote input REMOTE: 8-pin mini DIN connector

(See the figure in "Pin

assignment".)

General

Picture tube

PVM-96/96E:

21.7-cm (85/8 inches) picture measured diagonally 23.7-cm (93/8 inches) picture tube measured diagonally

PVM-136/146E:

32.1-cm (125/8 inches picture

measured diagonally

34.8-cm (133/4 inches) picture tube measured diagonally

Power consumption PVM-96: 28 W Max.

PVM-96E: 0.3 - 0.18 A, 26 W.

PVM-136: 30 W Max.

PVM-146E: 0.3 - 0.18 A, 28 W.

PVM-96/136:

120 V AC, 50/60 Hz

-Continued on next page-





Power requirements PVM-96E/146E:

100 - 240 V AC, 50/60 Hz

Operating temperature range

0 - 35°C (32 -95°F)

Storage temperature range

-10 - 40°C (14 -104°F)

Humidity

0 - 90%

Dimensions

PVM-96/96E:

Approx.  $217 \times 218 \times 250 \text{ mm} \text{ (w/h/d)}$ 

 $(8^{5}/8 \times 8^{5}/8 \times 9^{7}/8 \text{ inches})$ 

PVM-136/146E:

Approx.  $346 \times 340 \times 330$  mm (w/h/d)

 $(13^5/8 \times 13^1/2 \times 13 \text{ inches})$ not incl. projecting parts and

controls

Mass

PVM-96/96E: Approx. 5.5kg

(12 lb 2 oz)

PVM-136/146E: Approx. 11kg

(24 lb 4 oz)

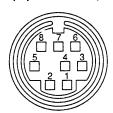
Accessories supplied

AC power cord (1) AC plug holder (1 set)

Cable with on 8pin connector (1)

## Pin assignment

## REMOTE connector (8-pin mini DIN)



Pin No.	Signal
1	LINE
2	INT/EXT SYNC
3	GND
4	16:9
5	H/V delay
6	Notch
7	Tally
8	Underscan

For remote control, connect the pin of the desired function to pin 3 (GND).

Design and specifications are subject to change without notice.

## SAFETY CHECK-OUT

(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

- Check the area of your repair for unsoldered or poorly-so'dered connections. Check the entire board surface for solder splashes and bridges.
- Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
- 3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
- Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair Point them out to the customer and recommend their replacement.
- Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
- 6. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
- Check the condition of the monopole antenna (if any).
   Make sure the end is not broken off, and has the plastic cap on it.
   Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
- Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
- Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

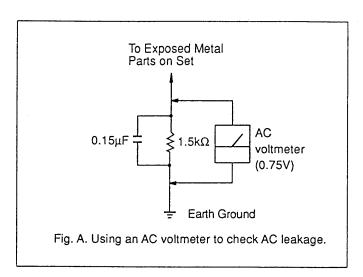
### **LEAKAGE**

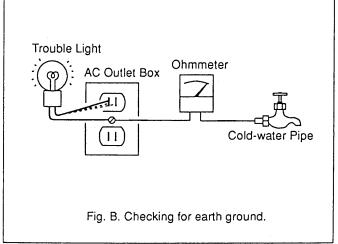
The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

- A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
- 2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
- 3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

### HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a coldwater pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)





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### (CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAPTO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

### WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.

THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

### SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK A ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

### (ATTENTION)

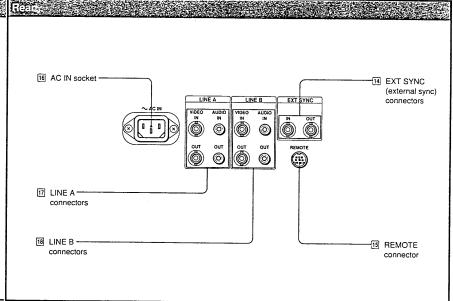
APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURTCIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAPAU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

### ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

### ATTENTION AUX COMPOSANTS RELATIFS ÁLA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE À SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES CONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.



### 1 Tally lamp

# 2 CONTR (contrast) control Turn clockwise to make the contrast stronger and

counterclockwise to make the contrast stronger and counterclockwise to make it weaker.

#### 3 VOLUME control

Turn this control clockwise or conterclockwise to obtain the desired volume.

### 4 POWER switch and indicator

Depress to turn the monitor on. The indicator will light up in green.

### 5 BRIGHT (brightness) control

Turn clockwise for more brightness and counterclockwise for less.

### 6 APER (aperture) control

Turn clockwise for more sharpness and counterclockwise for less.

### 7 V HOLD (vertical hold) control

Turn to stabilize the picture if it rolls vertically.

#### 8 H/V DELAY selector

Depress this button to observe the horizontal and vertical sync signals at the same time. The horizontal sync signal is displayed in the left quarter of the screen;

2 the vertical sync signal is displayed near the center of the screen.

SYNC INT/EXT (sync internal/external) selector Keep this button released (INT) to operate the monitor on the sync signal from the displayed composite video signal.

Depress this button (EXT) to operate the monitor on an external sync signal fed through the EXT SYNC connector on the rear panel.

### 10 LINE A/B input selector

Keep this button released (A) for a signal fed through the LINE A connectors. Depress this button (B) for a signal fed through the LINE B connectors.

#### 111 UNDER SCAN selector

Depress this button for underscanning. The display size is reduced by approximately 3% so that four corners of the raster are visible.

### 12 NOTCH switch

Normally keep this switch released (off) to obtain fine picture details without spill or noise.

Depress this switch (on), when stripes appear because of color video signals fed through the connected equipment.

### 13 4:3/16:9 (screen aspect ratio) selector

Normally keep this button released to view the screen with a 4:3 aspect ratio.

Depress this button to view the screen with a 16:9 aspect ratio.

### 14 EXT SYNC (external sync) connectors

IN (BNC): When this monitor operates on an external sync signal, connect the reference signal from a sync generator to this connector. In this case, depress the SYNC INT/EXT selector on the front panel (EXT).

OUT (BNC): Loop-through output of the EXT SYNC IN connector. Connect to the external sync input of video equipment to be synchronized with this monitor.

#### 15 REMOTE connector (8-pin mini DIN)

Connecting this connector to a switcher enables power on/off control.

For PVM-96E/146E, this connector can also be used for connecting to the tally output of a control console, special-effect generator, etc. The tally lamp on the front panel will be turned on and off by the connected equipment. For this connector's pin assignment, see "Specifications" on page 6.

#### 16 AC IN socket

Connect the AC power cord (supplied) to this socket and to a wall outlet.

### 17 LINE A connectors

To monitor a signal fed through these connectors, keep the LINE A/B input selector released on the front panel.

VIDEO IN (BNC): Connect to the video output of a video camera, VCR or other video equipment.

VIDEO OUT (BNC): Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

AUDIO IN (phono jack): Connect to the audio output of a VCR or a microphone (through a suitable microphone amplifier).

AUDIO OUT (phono jack): Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

#### 18 LINE B connectors

To monitor a signal fed through these connectors, depress the LINE A/B input selector on the front panel.

VIDEO IN (BNC): Connect to the video output of a video camera, VCR or other video equipment.

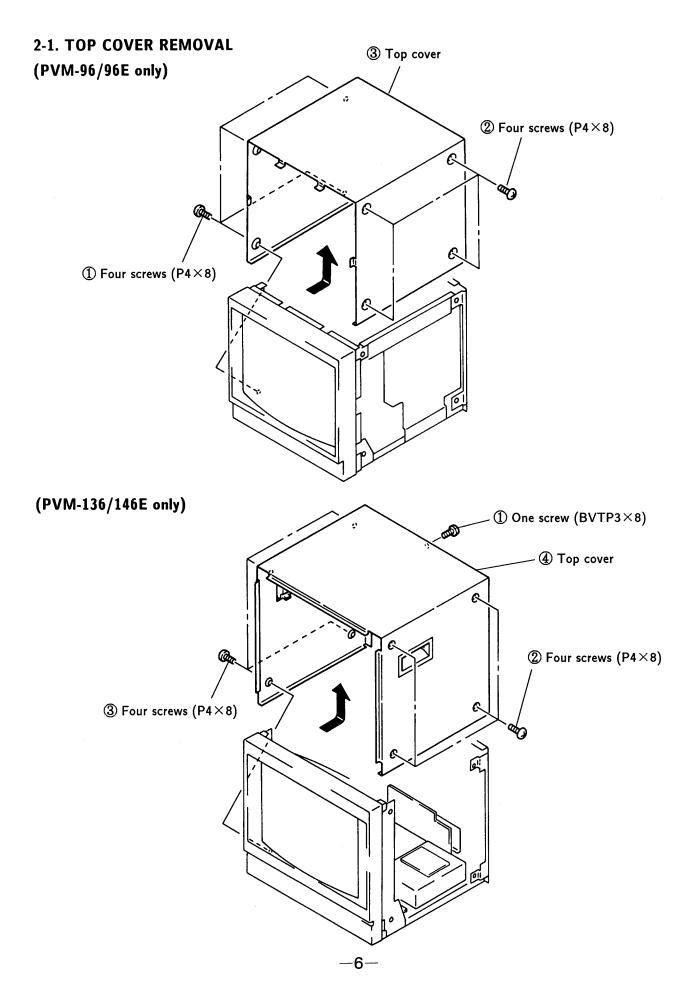
VIDEO OUT (BNC): Loop-through output of the VIDEO IN connector. Connect to the video input of a VCR or another monitor.

AUDIO IN (phono jack): Connect to the radio output of a VCR or a microphone (through a suitable microphone amplifier).

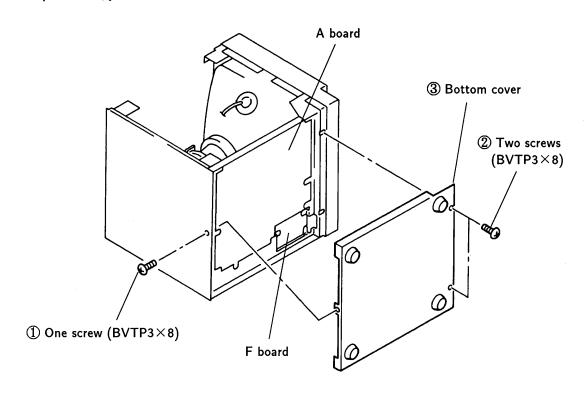
AUDIO OUT (phono jack): Loop-through output of the AUDIO IN connector. Connect to the audio input of a VCR or another monitor.

4

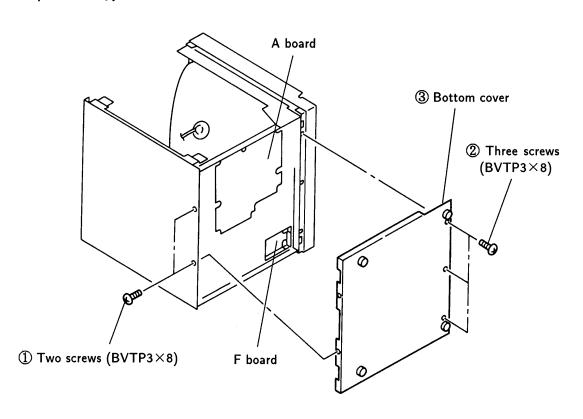
# SECTION 2 DISASSEMBLY



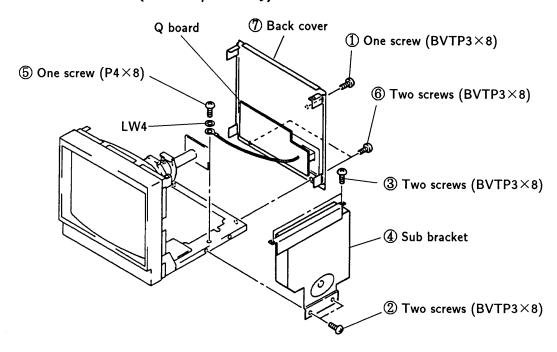
# 2-2. SERVICE POSITION (PVM-96/96E only)



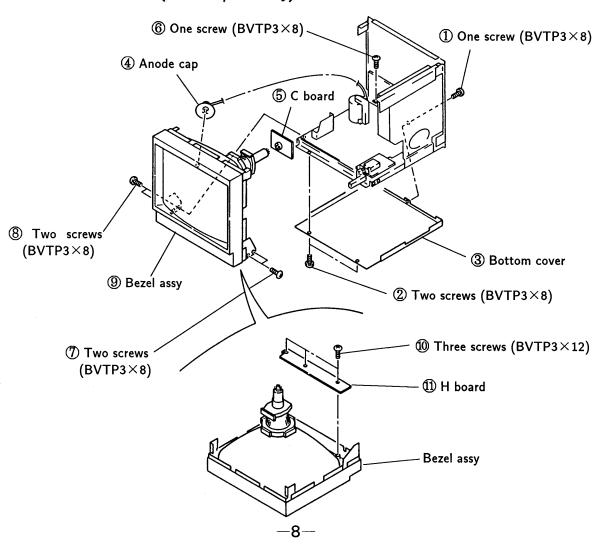
# (PVM-136/146E only)



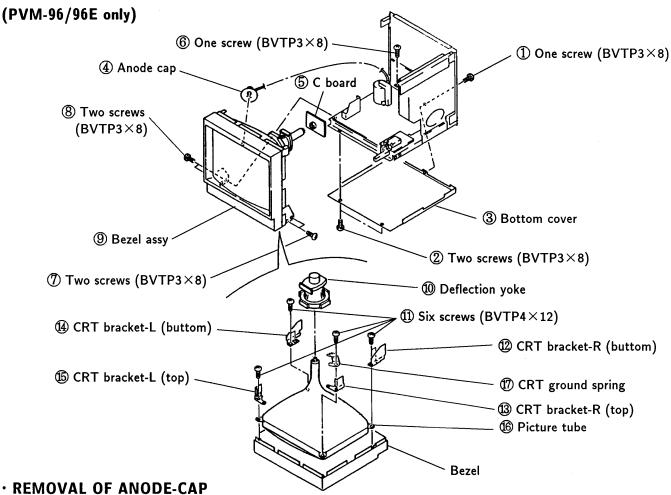
# 2-3. Q BOARD REMOVAL (PVM-96/96E only)



# 2-4. H BOARD REMOVAL (PVM-96/96E only)

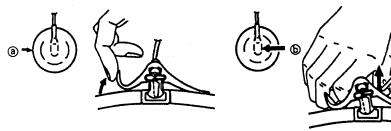


# 2-5. PICTURE TUBE REMOVAL

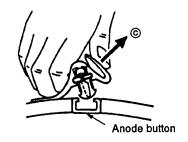


NOTE: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT chield or carbon painted on the CRT, after removing the anode.

### REMOVING PROCEDURES



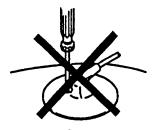
- ① Turn up one side of the rubber cap in the ② Using a thumb pull up the rubber cap direction indicated by the arrow (a).
  - firmly in the direction indicated by the arrow (b).

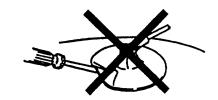


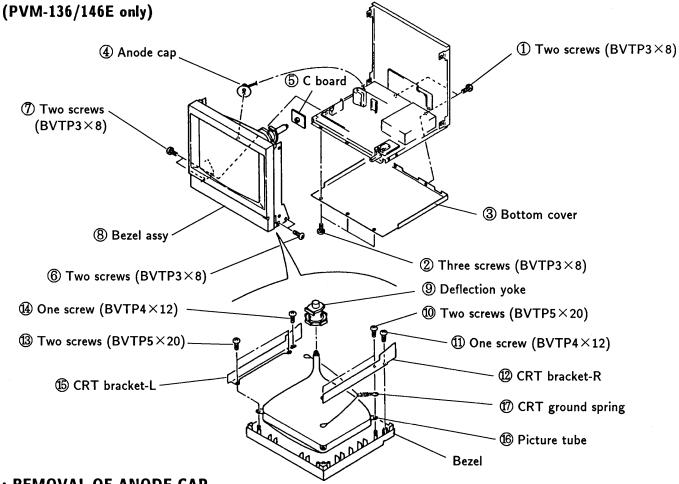
3 When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ©.

### • HOW TO HANDLE AN ANODE-CAP

- Don't hurt the surface of anode-caps with sharp shaped material!
- Don't press the rubber hardly not to hurt inside of anode-caps! A material fitting called as shatter-hook terminal is built in the rubber.
- Don't turn the foot of rubber over hardly! The shatter-hook terminal will stick out or hurt the rubber.



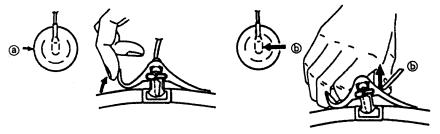




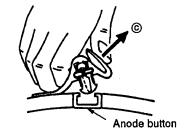
# REMOVAL OF ANODE-CAP

NOTE: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT chield or carbon painted on the CRT, after removing the anode.

## REMOVING PROCEDURES



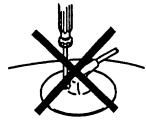
- direction indicated by the arrow @.
- ① Turn up one side of the rubber cap in the ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b).

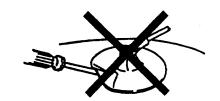


3 When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ©.

### HOW TO HANDLE AN ANODE-CAP

- Don't hurt the surface of anode-caps with sharp shaped material!
- Don't press the rubber hardly not to hurt inside of anode-caps! A material fitting called as shatter-hook terminal is built in the rubber.
- Don't turn the foot of rubber over hardly! The shatter-hook terminal will stick out or hurt the rubber.





# **SECTION 3** SAFETY RELATED ADJUSTMENTS (US Model only)

### 3-1. SAFETY RELATED ADJUSTMENT

## B+ MAX CONFIRMATION (►: RV651)

The following adjustments should always be performed when replacing the following components (maked a on the schematic diagram).

on the G board: R656, R657, R658, RV651

- 1. Supply  $120.0 \pm 2.0 \text{V}$  AC to with variable autotransformer.
- 2. Receive an entire white signal.
- 3. CONTRAST ..... normal BRIGHTNESS ..... normal
- 4. Connect a digital multimeter to the TP 2 (CN501 pin -(1) on the A board.
- 5. Adjust RV651 on the G board for  $24.0\pm0.2$ VDC.
- 6. After adjusting, fasten RV651 in place with epoxy.

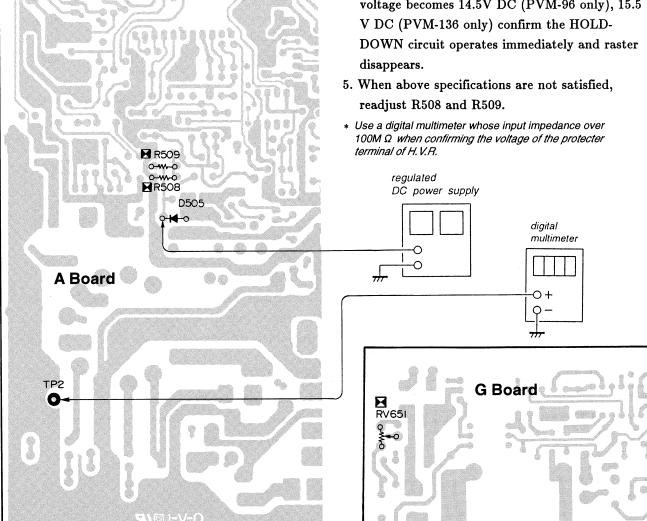
## HOLD-DOWN CIRCUIT CONFIRMATION READJUSTMENTS (► : R508, R509)

The following adjustments should always be performed when replacing the following components (maked  $\square$  on the schematic diagram).

on the A board:

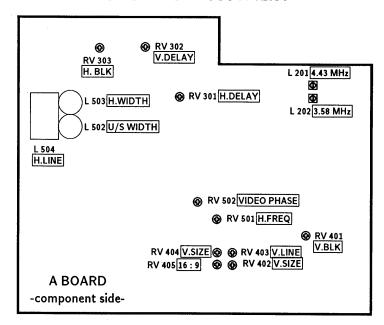
C518, C519, C520, C523, C524, D502, L502, R508, R509, T502 (FBT)

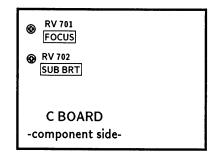
- 1. Supply  $120.0 \pm 2.0 \text{V}$  AC to with variable autotransformer.
- 2. Receive an entire white signal.
- 3. CONTRAST ······ Minimum BRIGHTNESS ..... Minimum
- 4. Apply an external DC voltage gradually to cathod of D505 on the A board, When the voltage becomes 14.5V DC (PVM-96 only), 15.5 V DC (PVM-136 only) confirm the HOLD-



# SECTION 4 CIRCUIT ADJUSTMENTS

## 4-1. A AND C BOARDS ADJUSTMENT





# ROUGH ADJUSTMENTS OF H. AND V. SIZE (L 503, R 402)

- 1. Input monoscope signal into video signal input terminal of line A.
- 2. Loosen deflection yoke fixing screw to adjust tilted image and fasten screw after adjustment.
- Make rough adjustments to obtain 15.5 frames in H. size and 12 frames in V. size by turning L503 (H. WIDTH) and RV402 (V.SIZE) respectively.

### HORIZONTAL OSCILLATING ADJUSTMENT (RV 501)

- 1. Connect electrolytic capacitor of  $10\mu F/25V$  between pin(1) of connector CN201 and grounding on "A" board.
- 2. Adjust RV501 (H. FREQ) to hold flowing image.

### SUB BRIGHTNESS ADJUSTMENT (RV702)

- 1. Input gray scale signal into video signal input terminal of line A.
- 2. Set BRIGHT knob at the center and CONTR knob at the minimum position.
- Adjust RV702 (SUB. BRT) on "C" board so that 20 IRE part of gray scale glows slightly.

## ADJUSTMENT IMAGE DISTORTION

- 1. Input cross hatching signal into video signal input terminal of Line A.
- 2. Adjust vertical and horizontal pin distortions with disk magnet.
- 3. Input monoscope signal into video signal input terminal of line A.
- 4. Adjust with disk magnet until corner circle becomes to true circle.

### ADJUSTMENT OF H. AND V. CENTER

Adjust horizontal center and vertical center with centering magnet.

## H. LINE ADJUSTMENT (L 504)

Turn L 504 (H. LINE) on "A" board so that the horizontal length will be the same in either direction from the center of image.

### V. LINE ADJUSTMENT (RV 403)

Turn RV403 (V. LINE) on "A" board so that the vertical length will be the same in either direction from the center of image.

### H. AND V. SIZE FINE ADJUSTMENT (L 503, RV 402)

- 1. Input monoscope signal into video signal input terminal of line A.
- 2. Set BRIGHT knob at 50% position and CONTR knob at 80% position.
- 3. Turn L503 (H. WIDTH) and RV402 (V. SIZE) to obtain the following number of frames.

(PVM-96/96 E only)

H. SIZE: 15.3 frames V. SIZE: 12.0 frames

(PVM-136/146 E only)

H. SIZE: 15.0 frames V. SIZE: 12.0 frames

## **FOCUS ADJUSTMENT (RV701)**

- 1. Input monoscope signal into video signal input terminal of line A.
- 2. Set BRIGHT knob at 50% position and CONTR knob at 80% position.
- 3. Turn RV701 on "C" board to adjust mid point between the center and the corner becomes just in focus while watching focus balance of them.

# ADJUSTMENT IN UNDER SCANNING MODE H. AND V. SIZE FINE ADJUSTMENT (L502, RV404)

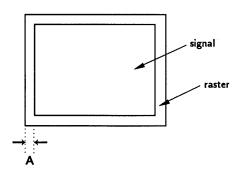
- 1. Input monoscope signal into video signal input terminal of line A.
- 2. Set BRIGHT knob at 50% position and CONTR knob at 80% position.
- 3. Change mode to under scan by pressing under scan switch located in front of the set.
- 4. Turn both L502 (U/S WIDTH) and RV404 (V. SIZE) to adjust under scan so as to enable corner of monoscope signal touches with the corner of effective image area of CRT.

### VIDEO PHASE ADJUSTMENT (RV502)

- 1. Set BRIGHT knob at maximum and CONTR knob at minimum position.
- 2. Turn RV502 (VIDEO PHASE) so that the luster comes at the center.

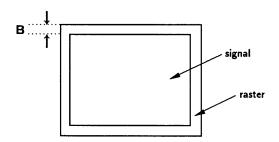
### H. BLK ADJUSTMENT (RV 303)

- 1. Set BRIGHT knob at maximum and CONTR knob at minimum position.
- 2. Turn RV 303 (H. BLK) so that the distance between the luster at left side of CRT and signal part (A) will become approximately 1.0 mm.



## V. BLK ADJUSTMENT (RV401)

- 1. Set BRIGHT knob at maximum and CONTR knob at minimum position.
- 2. Turn RV401 (V. BLK) so that the distance between the luster at top of CRT image and signal part (B) will become approximately 1.0 mm.

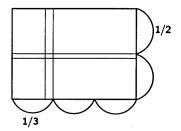


## 16:9 ADJUSTMENT (RV 405)

- 1. Input monoscope signal into video signal input terminal of line A.
- 2. Turn on 16:9 switch located on the front panel.
- 3. Turn RV 405 (16:9) to adjust H. to 16 and V. to 9.

### H/V DELAY ADJUSTMENT (RV 301, RV 302)

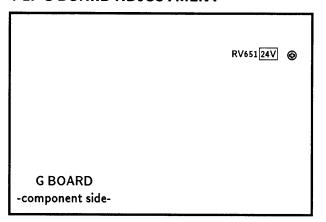
- 1. Input monoscope signal into video signal input terminal of line A.
- 2. Turn on H/V delay switch located on the front panel.
- 3. Turn RV301 (H. DELAY) to adjust so that H. BLK signal part comes at the position of one third of left side of the image.
- 4. Turn RV302 (V. DELAY) to adjust so that V. BLK signal part comes at the position of one half of vertical direction of the image.



## NOTCH ADJUSTMENT (L 201, L 202)

- 1. Input color bar signal of NTSC into video signal input terminal of Line A.
- 2. Connect oscilloscope between pin 3 of connector CN 202 and grounding.
- 3. Adjust L202 (3.58MHz) to minimize color component CN202 and grounding.
- 4. Input color bar signal of PAL system.
- Connect oscilloscope between pin 3 of connector CN 202 and grounding.
- Adjust L201 (4.43MHz) to minimize color component of 4.43MHz.

## 4-2. G BOARD ADJUSTMENT

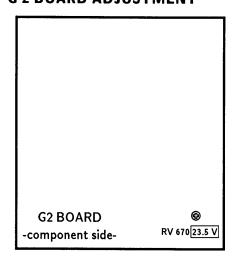


## B+ LINE VOLTAGE ADJUSTMENT (RV 651)

Input voltage 120V AC: PVM-96/136 only 230V AC: PVM-96 E/146E only

- 1. Input monoscope signal into video signal input terminal of line A.
- 2. Connect digital multimeter to pin 1 of CN501.
- 3. Turn RV651 to adjust it to 24.0  $\pm$  0.2VDC.

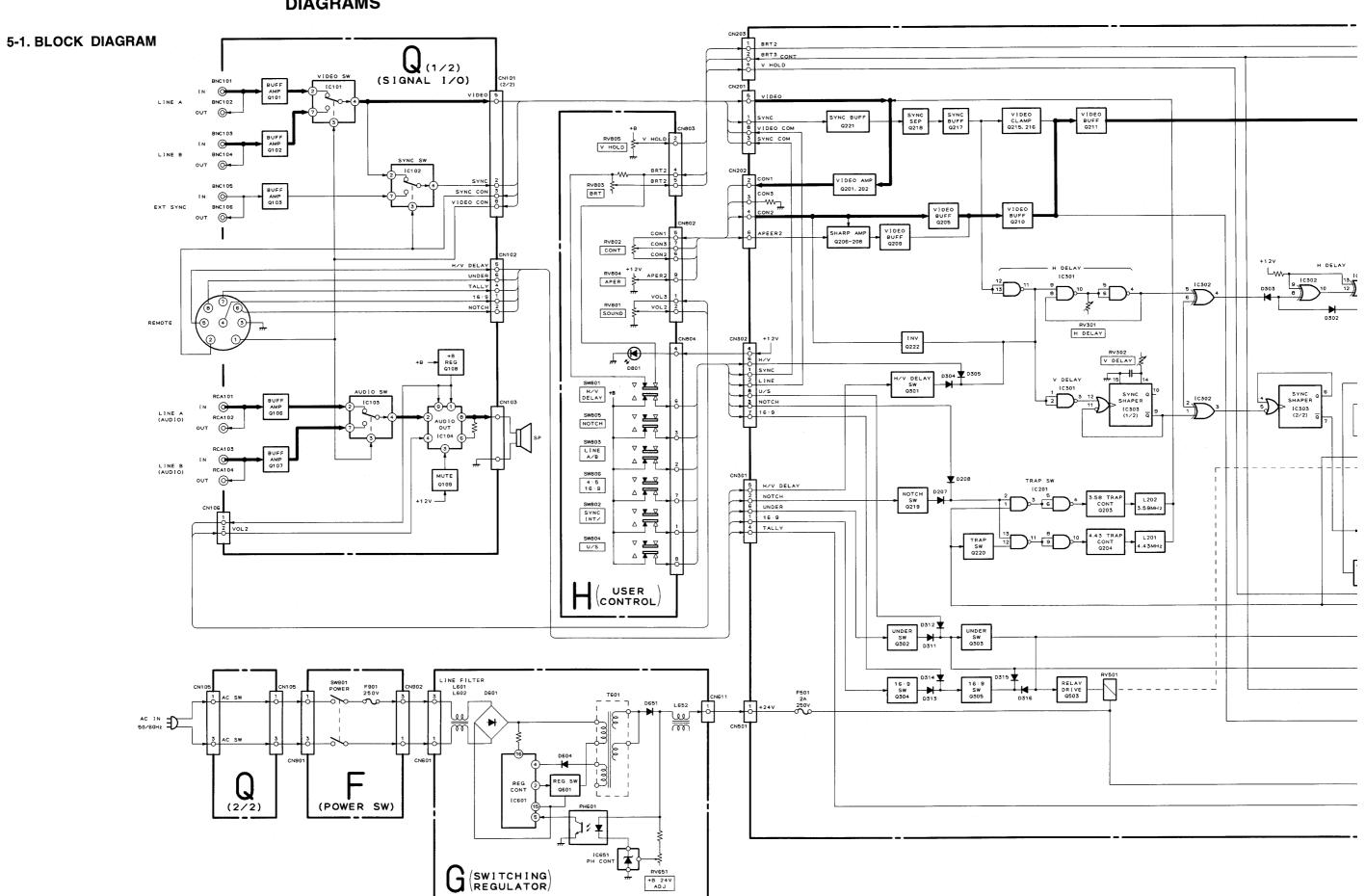
## 4-3. G 2 BOARD ADJUSTMENT

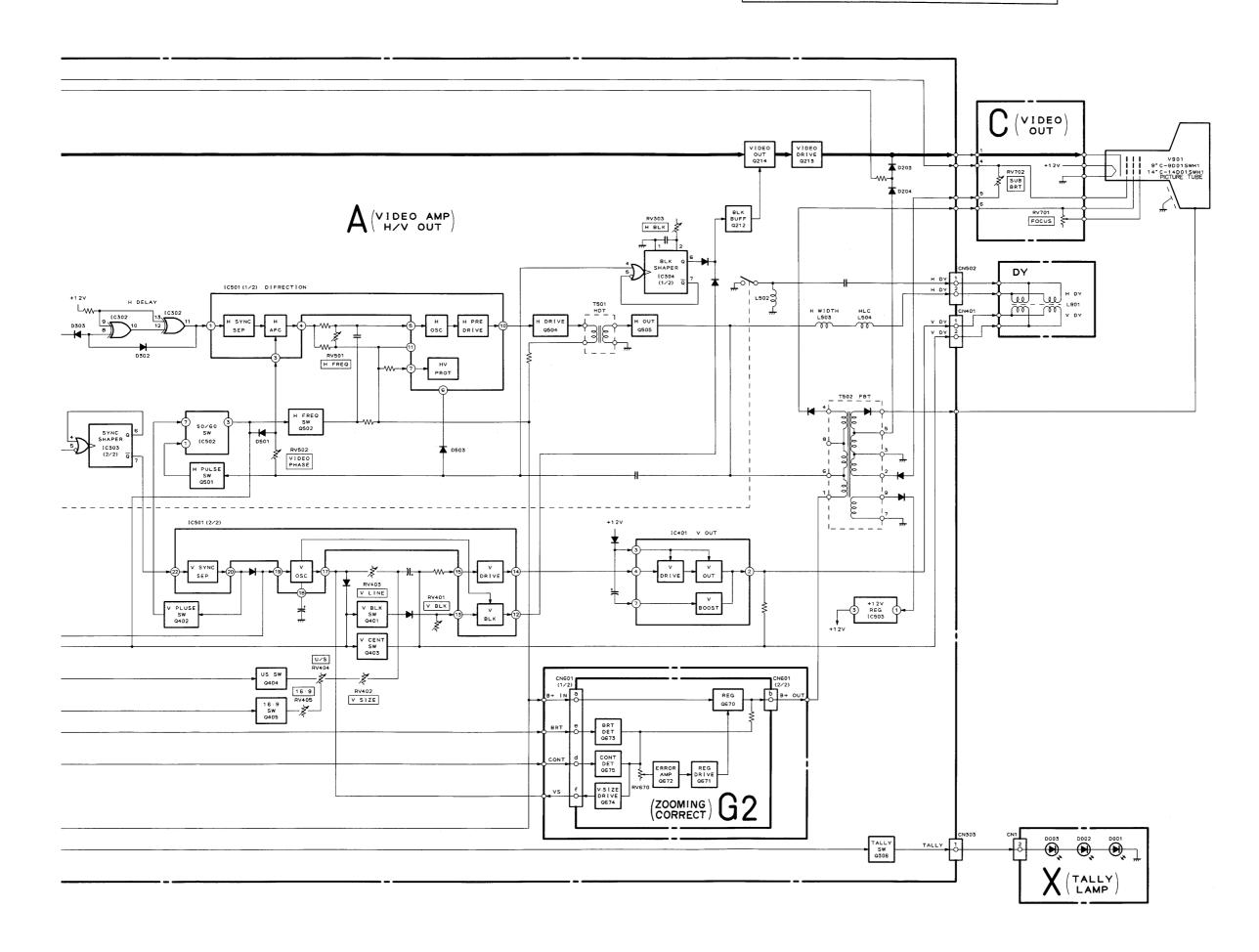


## +23.5 V ADJUSTMENT (RV 670)

- 1. Input monoscope signal into video signal input terminal of line A.
- 2. Connect digital multimeter to emitter of Q 670.
- 3. Confirm the voltage is  $24.0 \pm 0.2 \text{VDC}$ .
- 4. BRIGHT ..... Minimum CONTR ..... Minimum
- 5. Connect a digital multimeter to the collector of Q670.
- 6. Turn RV 670 to adjust it to 23.5  $\pm$  0.1 VDC.

# SECTION 5 DIAGRAMS



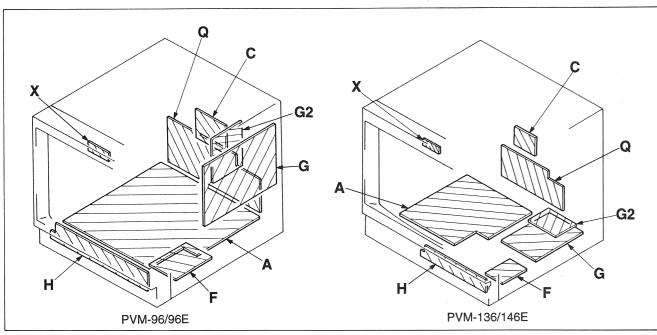


**TANTALUM** 

STYROL

MYLAR

### 5-2. CIRCUIT BOARDS LOCATION



### 5-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

### Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics.
- · Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm Rating electrical power 1/4W

- · All resistors are in ohms.
- : nonflammable resistor.
- fw-> : fusible resistor.
- : panel designation.
- · All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ullet The components identified by lacktriangle in this basic schematic diagram have been carefully factoryselected for each set in order to satisfy regulations regarding X-ray radiation.
  - Should replacement be required, replace only with the value originally used.
- When replacing components identified by , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by A and repeat the adjustment until the specified value is achieved.
- (Refer to RV651, and R406, R408 adjust on page 11.)
- · When replacing the part in below table be sure to parform the related adjustment.

Part replaced(☑)	Adjustment(►)
G BOARD RV651,R656,R657,R658	RV651 (B+ MAX)
A BOARD C518,C519,C520,C523,C524,D502,L502, R508,R509,T502(FBT)	R508,R509 (HOLD-DOWN)

- · All voltages are in V.
- · Voltage are dc with respect to ground unless otherwise
- · Readings are taken with a color-bar signal input.
- : adjustment for repair.
- · Voltage variations may be noted due to normal production tolerance.

: B+ bus.

· B = : B-bus.

COIL

· : signal path.

· Color-bar signal received or common voltage.

## Reference information

RESISTOR : RN METAL FILM : RC SOLID

: FPRD NONFLAMMABLE CARBON : FUSE NONFLAMMABLE FUSIBLE NONFLAMMABLEWIREWOUND : RS NONFLAMMABLE CEMENT : RB

: LF-8L MICRO INDUCTOR

METALIZED POLYESTER : MPS METALIZED POLYPROPYLENE : MPP

: PS

: PP :PT

CAPACITOR: TA

: ALB **BIPOLAR** 

POLYPROPYLENE

HIGH TEMPERATURE : ALT HIGH RIPPLE : ALR

Note:

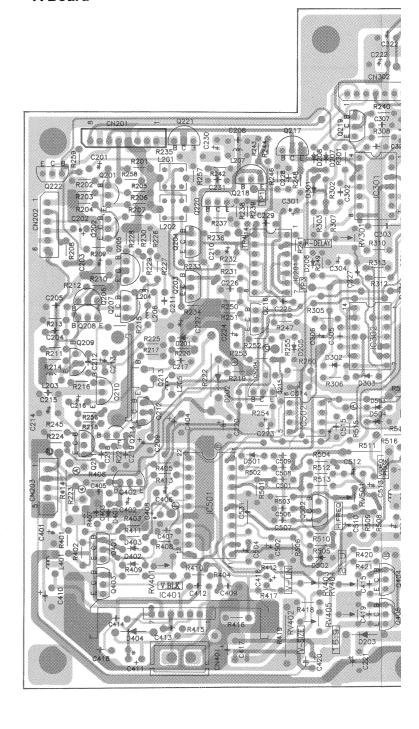
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par un tramé et une marque ∆ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

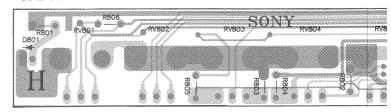




- A Board -



### - H Board -





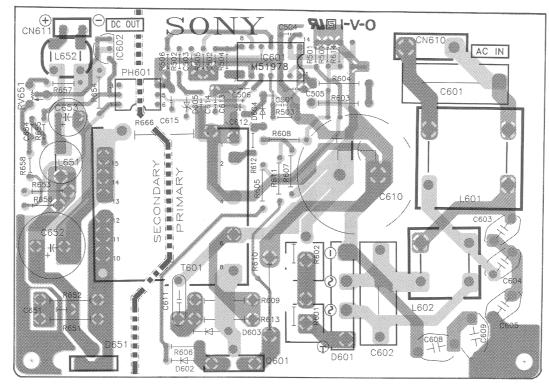










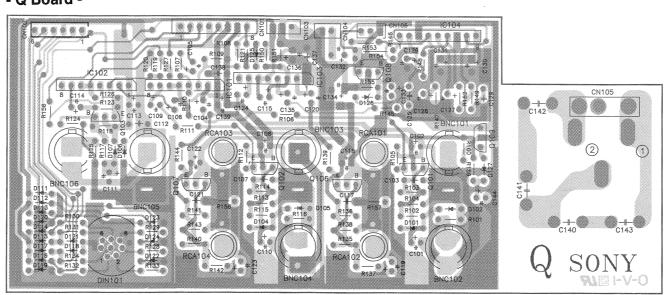


· Pattern from the side which enables seeing. · Pattern of the rear side.

## - Q Board -

- X Board -

SONY



· Pattern from the side which enables seeing.

· Pattern of the rear side.

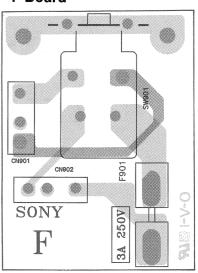
## - G Board -

- F Board -

- G2 Board -

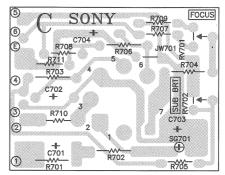
G2

SONY



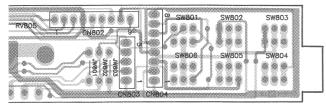
· Pattern from the side which enables seeing. : Pattern of the rear side.

## - C Board -



· Pattern from the side which enables seeing. · Pattern of the rear side.





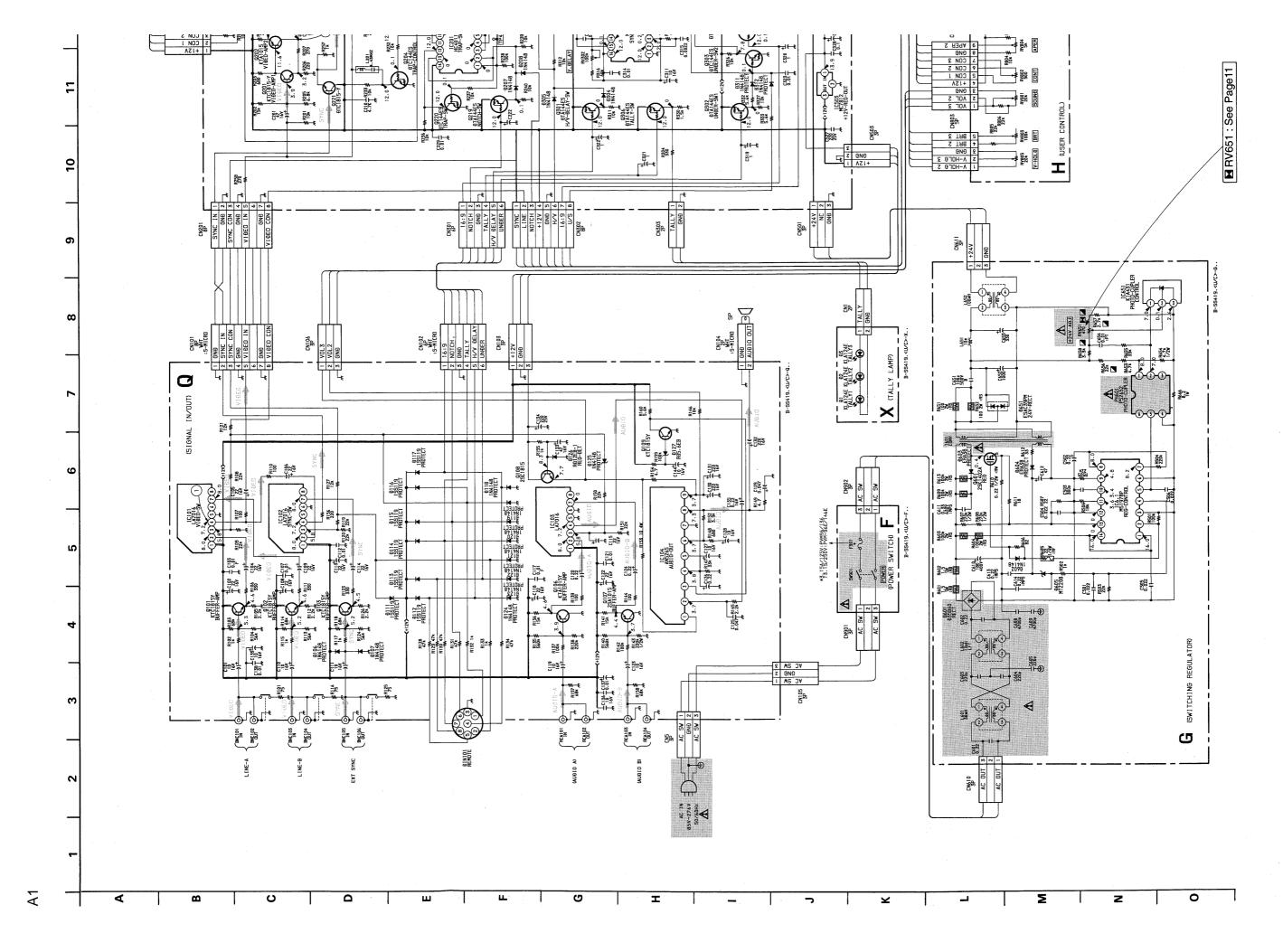
· Pattern from the side which enables seeing.

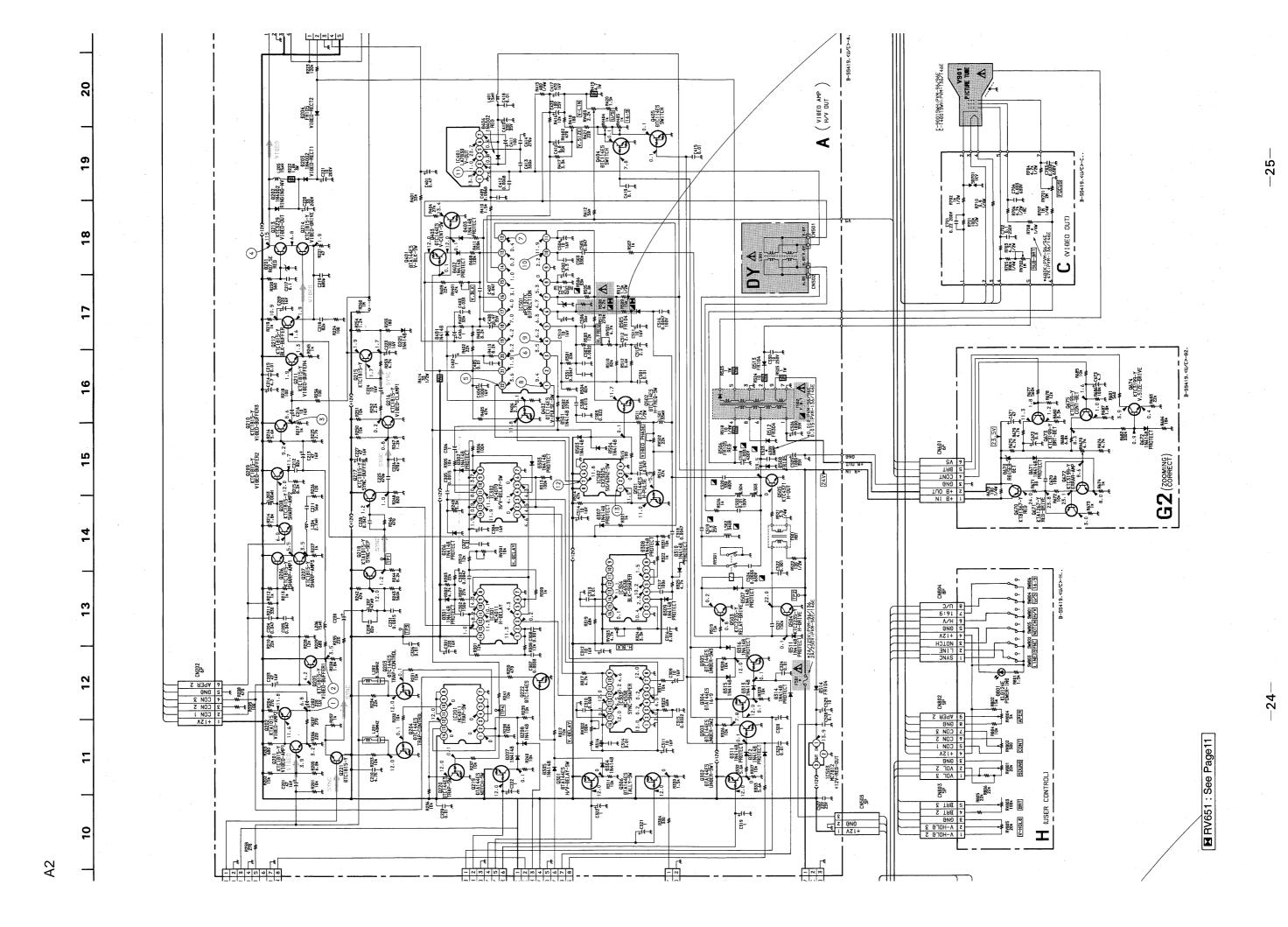
· Pattern of the rear side.

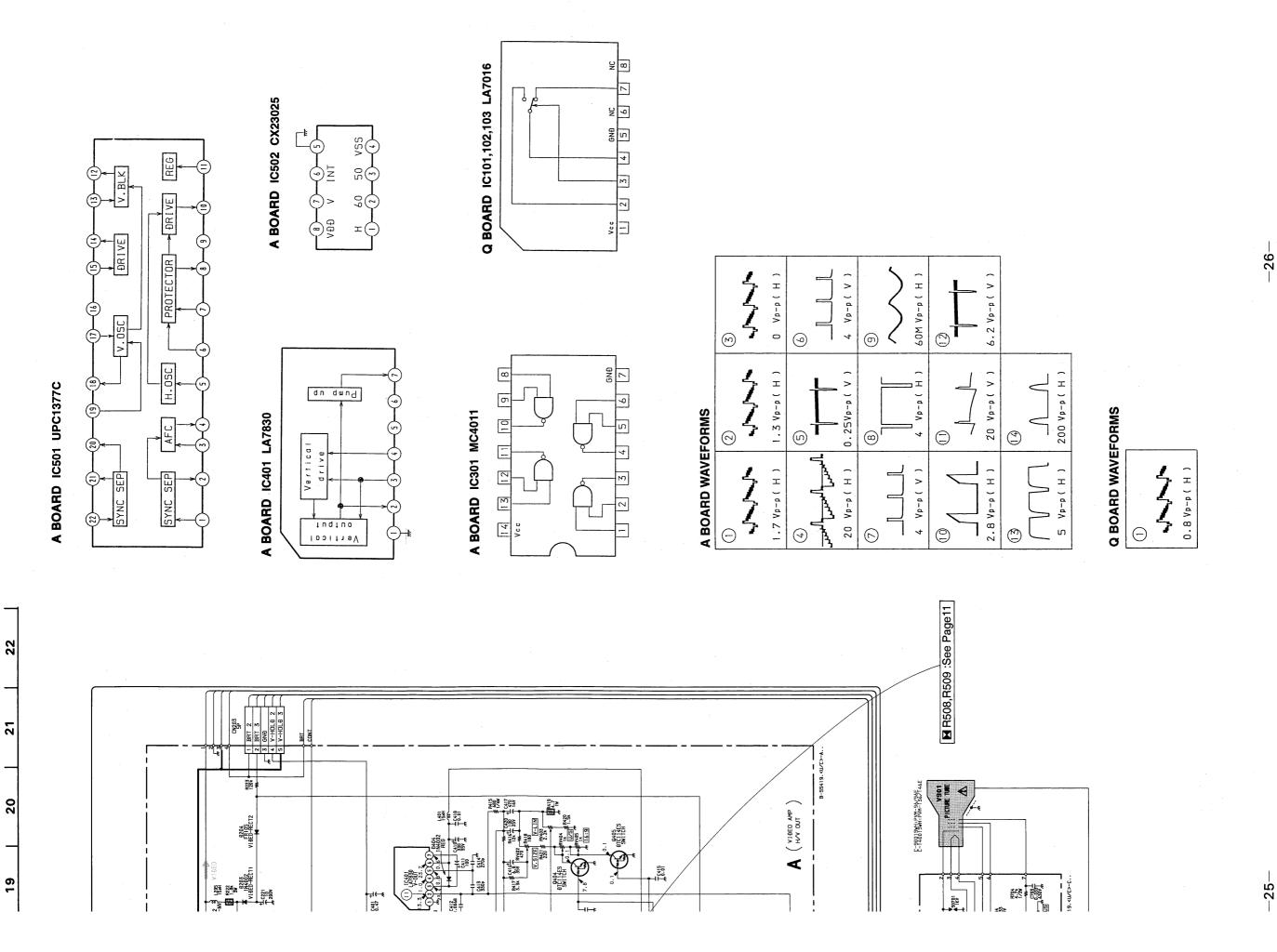
# A/C/F/G/G2/H/Q/X

The following have been devided into 3 sections as noted on the grid shown below.

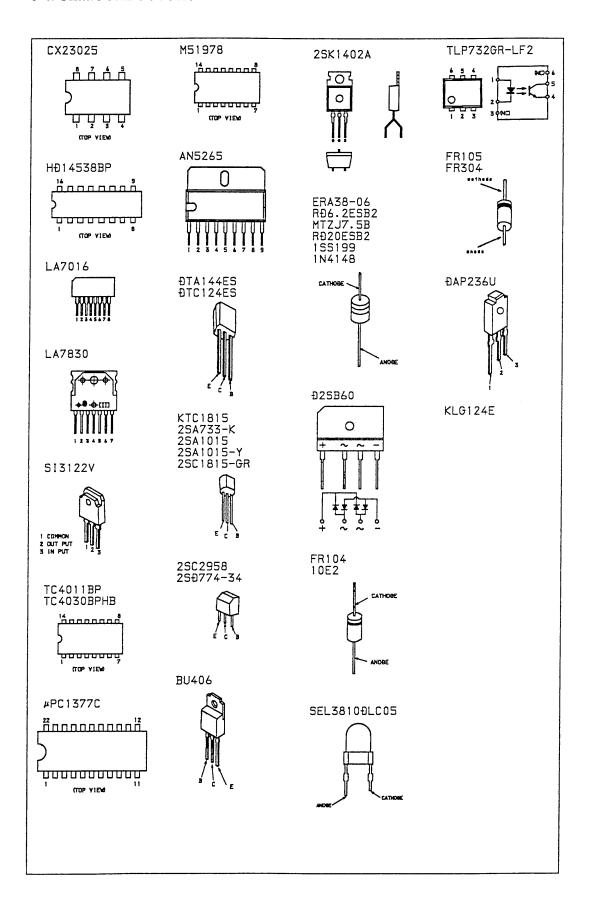
A1	A2	A3







## 5-4. SEMICONDUCTORS



# SECTION 6 EXPLODED VIEWS

#### NOTE

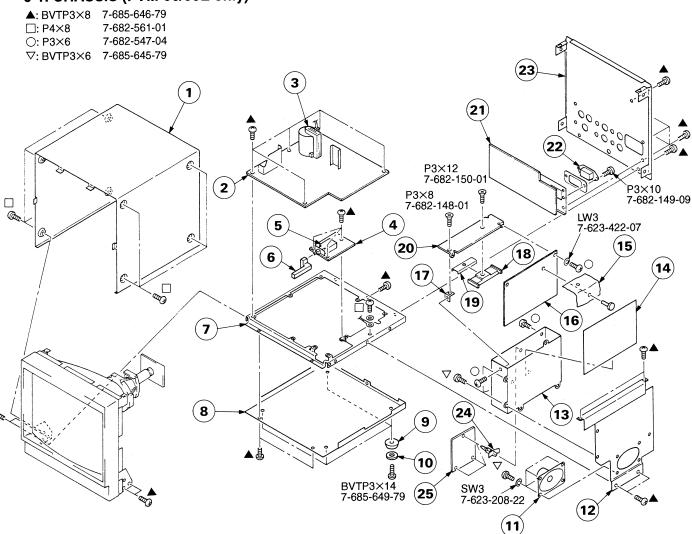
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark  $ext{$ \triangle $}$  are critical for safety.

Replace only with part number specified.

Les composants identifies par une trame et une marque A sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

## 6-1. CHASSIS (PVM-96/96E only)

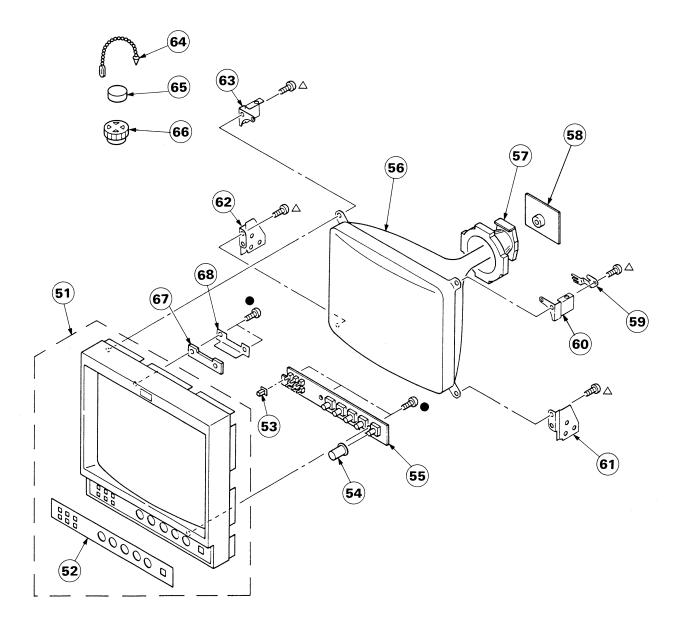


REF. NO. PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	A BOARD, COMPLETE TRANSFORMER ASSY, FLYBACK F BOARD SWITCH, PUSH (AC POWER) KNOB, POWER SW CHASSIS, BOTTOM COVER, BOTTOM FOOT CUSHION, FOOT SPEAKER		14 15 16 17 18 19 20 21	*3-708-707-01 3-708-708-01 *9-905-683-01 *3-708-684-01 3-708-681-01 *3-708-692-01 *3-708-692-01 *9-905-707-01 \$1-560-222-21 *3-708-687-01 3-703-353-03	SHEET, PC RUBBER G BOARD, COMPLETE BRACKET, HEAT SINK HOLDER, IC BRACKET, IC HEAT SINK-AL Q BOARD, COMPLETE AC INLET COVER, BACK	

# 6-2. PICTURE TUBE (PVM-96/96E only)

●: BVTP3×12 7-685-648-79 △: BVTP4×14 7-685-662-14 The components identified by shading and mark A are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque <u>A</u> sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

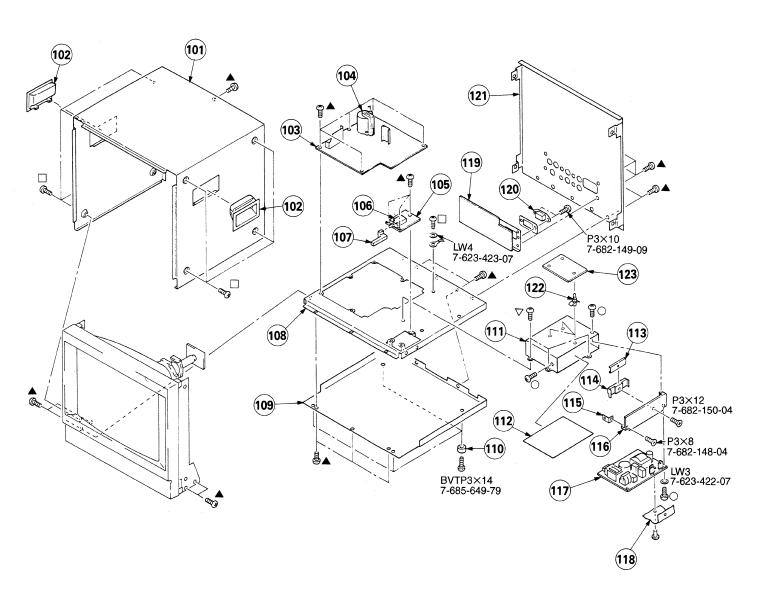


REF. NO. PART NO.	<u>DESCRIPTION</u> <u>REM</u>	ARK REF. 1	NO. PART NO.	DESCRIPTION	REMARK
55 *9-905-695-01 56 <u>\( \Lambda\) 9-905-701-01</u>	BEZEL ASSY PLATE, CONTROL KNOB, PUSH SW KNOB, CONTROL H BOARD PICTURE TUBE (C9D01SWH1) DEFLECTION YOKE C BOARD SPRING, CRT GROUND	60 61 62 63 64 65 66 67 68	*3-708-678-01 *3-708-679-01 *3-708-677-01 *3-708-676-01 4-308-870-00 1-452-032-00 1-452-094-00 *9-905-696-01 *3-708-709-01	BRACKET-R (TOP), CRT BRACKET-R (BOTTOM), CRT BRACKET-L (BOTTOM), CRT BRACKET-L (TOP), CRT CLIP, LEAD WIRE MAGNET, DISK;10MM \$\phi\$ MAGNET, ROTATABLE DISK;15MM \$\phi\$ X BOARD PLATE, LIGHT INTERCEPTION	

# 6-3. CHASSIS (PVM-136/146E only)

▲: BVTP3×8 7-685-646-79 □: P4×8 7-682-561-01 ○: P3×6 7-682-547-04 ∇: BVTP3×6 7-685-645-79 The components identified by shading and mark A are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque <u>A</u> sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.



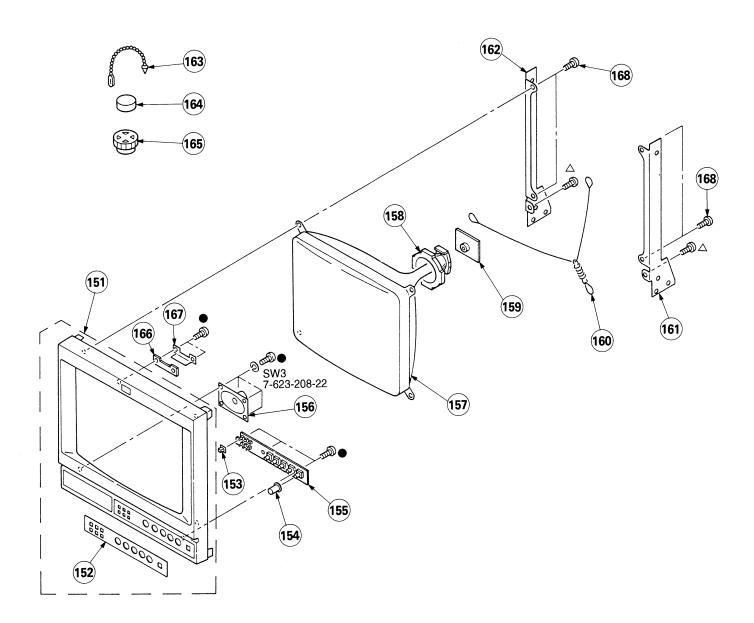
REF. NO. PART NO.	<u>DESCRIPTION</u> <u>REM</u>	MARK REF. NO	. PART NO.	DESCRIPTION	REMARK
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	HANDLÉ A BOARD, COMPLETE	112 113 114 115 116 117 118 119 120 121 122 123	*3-708-707-01 *3-708-681-01 3-708-683-01 *3-708-684-01 *3-708-692-01 *9-905-683-01 3-708-708-01 9-905-707-01 \$\Lambda_1-560-222-21 *3-708-704-01 3-703-353-03 *9-905-708-01	SHEET, PC BRACKET, IC HOLDER, IC BRACKET, HEAT SINK HEAT SINK-AL G BOARD, COMPLETE RUBBER Q BOARD, COMPLETE AC INLET COVER, BACK SUPPORT, PC BOARD G2 BOARD, COMPLETE	

Les composants identifies par une trame et une marque A sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark A are critical for safety.
Replace only with part number specified.

## **6-4. PICTURE TUBE (PVM-136/146E only)**

●: BVTP3×12 7-685-648-79 △: BVTP4×12 7-685-661-14



REF. NO. PART NO.	<u>DESCRIPTION</u> <u>R</u>	REMARK REF	NO. PART NO.	DESCRIPTION	REMARK
151 X-3705-087- 152 3-708-694-0 153 3-708-711-0 154 3-708-680-0 155 *9-905-695-0 156 1-544-063-0 157 A9-905-703-0 158 A9-905-699-0 159 *9-905-690-0	PLATE, CONTROL KNOB, PUSH SW KNOB, CONTROL H BOARD SPEAKER PICTURE TUBE (C14D01SWH1) DEFLECTION YOKE	16 16 16 16 16 16 16 16 16	1 *3-708-699-01 2 *3-708-698-01 3 4-308-870-00 4 1-452-032-00 5 1-452-094-00 6 *9-905-696-01 7 *9-708-710-01	SPRING, CRT GROUND BRACKET-R, CRT BRACKET-L, CRT CLIP, LEAD WIRE MAGNET, DISK; 10MM \$\phi\$ MAGNET, ROTATABLE DISK; 15MM \$\phi\$ X BOARD PLATE, LIGHT INTERCEPTION SCREW, TAPPING 5×25	



# NOTE:

The components identified by shading and mark 🛕 are critical for safety. Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

# **SECTION 7 ELECTRICAL PARTS LIST**

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- · All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

### **RESISTORS**

- All resistors are in ohms.F: nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS • MF:  $\mu$  F, PF:  $\mu\mu$  F

COILS • MMH: mH, UH: μH

REF.	NO.	PART NO.	DESCRIPTION			REMAR	K REF. NO.	PART NO.	<u>DESCRIPTION</u>			REMARK
		*9-905-668-01	********	****		96/96E ONLY	C313 C314	1-126-964-11 1-130-483-00 1-130-483-00	ELECT FILM FILM	10MF 0.01MF 0.01MF	20% 5% 5%	16V 50V 50V
		*9-905-706-01	A BOARD, COMI ************************************		(PVM-13	6/146E ONLY	C315 C316 C317 C318	1-129-898-00 1-108-680-11 1-102-973-00 1-106-359-00	FILM FILM CERAMIC FILM	0.0022MF 0.001MF 100PF 0.0047MF	10% 10% 5% 5%	630V 100V 50V 50V
C20 C20 C20 C20 C20	03 04 05	1-124-910-11 1-124-120-11 1-124-910-11 1-108-812-11 1-108-812-11	ELECT ELECT ELECT FILM FILM	47MF 220MF 47MF 0.047MF 0.047MF	20% 20% 20% 5% 5%	16V 16V 16V 50V 50V	C319 C320 C321 C322 C323 C326	1-124-903-11 1-124-903-11 1-102-125-00 1-124-903-11 1-101-004-00 1-101-004-00	ELECT CERAMIC ELECT CERAMIC CERAMIC CERAMIC	1MF 1MF 0.0047MF 1MF 0.01MF 0.01MF	20% 20% 10% 20%	50V 50V 50V 50V 50V 50V
C20 C20 C20 C20 C20	08 09 10	1-101-880-00 1-101-880-00 1-102-971-00 1-124-041-11 1-123-369-00	CERAMIC CERAMIC CERAMIC ELECT ELECT	47PF 47PF 82PF 220MF 4.7MF	5% 5% 5% 20% 20%	50V 50V 50V 16V 50V	C327 C401 C402 C403 C404	1-101-004-00 1-124-902-00 1-124-903-11 1-108-843-11 1-124-360-00	CERAMIC ELECT ELECT FILM ELECT	0.01MF 0.47MF 1MF 0.033MF 1000MF	20% 20% 10% 10%	50V 50V 50V 50V 16V
C21 C21 C21 C21 C21	13 14	$\begin{array}{c} 1-101-884-00 \\ 1-102-971-00 \\ 1-124-910-11 \\ 1-123-369-00 \\ 1-101-004-00 \end{array}$	CERAMIC CERAMIC ELECT ELECT CERAMIC	56PF 82PF 47MF 4.7MF 0.01MF	5% 5% 20% 20%	50V 50V 16V 50V 50V	C405 C406 C407 C408 C409	1-130-483-00 1-124-903-11 1-108-812-11 1-131-345-00 1-108-802-11	FILM ELECT FILM TANTALUM FILM	0.01MF 1MF 0.047MF 0.47MF 0.0068MF	5% 20% 5% 20% 5%	50V 50V 50V 35V 50V
C21 C21 C21 C21 C22	18 19	1-126-964-11 1-108-816-11 1-102-971-00 1-102-116-00 1-123-949-00	ELECT FILM CERAMIC CERAMIC ELECT	10MF 0.1MF 82PF 680PF 33MF	20% 5% 5% 10% 20%	16V 50V 50V 50V 200V	C410 C411 C412 C413 C414	1-124-580-11 1-124-572-11 1-102-116-00 1-102-820-00 1-102-980-00	ELECT ELECT FILM CERAMIC CERAMIC	330MF 100MF 680PF 330PF 270PF	20% 20% 5% 5% 5%	35V 50V 50V 50V 50V
C22 C22 C22 C22 C22	22 23 24	1-123-949-00 1-124-903-11 1-126-101-11 1-126-964-11 1-102-824-00	ELECT ELECT ELECT ELECT CERAMIC	10MF 1MF 100MF 10MF 470PF	20% 20% 20% 20% 5%	200V 50V 16V 16V 50V	C415 C416 C417 C418 C419	1-101-004-00 1-131-352-00 1-124-480-11 1-101-004-00 1-161-772-11	CERAMIC TANTALUM ELECT CERAMIC CERAMIC	0.01MF 6.8MF 470MF 0.01MF 0.1MF	20% 20% 20%	50V 35V 25V 50V 50V
C22 C22 C22 C23 C23	28 29	1-102-824-00 1-124-910-11 1-108-812-11 1-101-004-00 1-124-903-11	CERAMIC ELECT FILM CERAMIC ELECT	470PF 47MF 0.047MF 0.01MF 1MF	5% 20% 5% 20%	50V 16V 50V 50V 50V	C420 C501 C502 C503 C504	1-124-478-11 1-130-483-00 1-123-382-00 1-102-820-00 1-126-964-11	ELECT FILM ELECT CERAMIC ELECT	100MF 0.01MF 3.3MF 330PF 10MF	20% 5% 20% 5% 20%	25V 50V 50V 50V 16V
C2: C3: C3: C3: C3:	01 02 03	1-102-118-00 1-124-120-11 1-101-361-00 1-108-688-11 1-126-964-11	CERAMIC ELECT CERAMIC FILM ELECT	0.0012MF 220MF 150PF 0.0047MF 10MF	10% 20% 5% 10% 20%	50V 16V 50V 200V 16V	C505 C506 C507 C508 C509	1-108-812-11 1-101-884-00 1-106-351-00 1-130-485-00 1-108-808-11	FILM CERAMIC FILM FILM FILM	0.047MF 56PF 0.0022MF 0.015MF 0.022MF	5% 5% 5% 5% 5%	50V 50V 50V 50V 50V
C3( C3) C3( C3)	06 07 08	1-102-119-00 1-124-903-11 1-108-798-11 1-108-792-11 1-126-964-11	ELECT ELECT FILM FILM ELECT	0.0015MF 1MF 0.0033MF 0.001MF 10MF	10% 20% 5% 5% 20%	50V 50V 50V 50V 16V	C510 C511 C512 C513 C514	1-126-964-11 1-126-964-11 1-123-381-00 1-123-381-00 1-126-964-11	ELECT ELECT ELECT ELECT ELECT	10MF 10MF 2. 2MF 2. 2MF 10MF	20% 20% 20% 20% 20%	16V 16V 50V 50V
C3 C3	10 11	1-108-814-11 1-126-964-11		0.068MF 10MF	5% 20%	50V 16V	C514	1-108-812-11		0.047MF	5%	50V



REF. NO.	PART NO.	DESCRIPTION			<u> </u>	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
C516	1-108-684-11	FILM	0.0022MF	10%	200V		D503	8-719-911-19	DIODE 1SS119		
C517 C518 C519	1-106-351-00 1-129-720-00 1-136-598-11	FILM FILM FILM	0.0022MF 0.033MF 3.0MF	10% 10%	100V 630V 200V		D504 D505	8-719-911-19 8-719-911-19	DIODE 1SS119		
C520 C521	1-102-030-00 1-101-361-00	CERAMIC CERAMIC	330PF 150PF	10% 5%	400V 500V		D506 D507 D508	8-719-911-19 8-719-901-17 8-719-911-19 8-719-911-19	DIODE VIIL DIODE 1SS119 DIODE 1SS119		
C522 C523	1-108-792-11 1-129-717-00	FILM FILM	0.001MF 0.018MF	5% 10% (PVM-	50V 630V -96/96E ONLY)		D511 D512	8-719-911-19 9-905-661-01	DIODE 1SS119 DIODE FR304		
C523	1-129-716-00	FILM	0.015MF	10%	630V	OMI V)	D513 D514	8-719-985-76 8-719-985-76	DIODE FR104 DIODE FR104		
C525	1-136-557-11 1-126-105-11 1-126-105-11		0.0033MF 1000MF 1000MF	10% 20% 20%	36/146E 630V 35V 35V	UNLI)		<ic></ic>			
C527 C528	1-136-244-11	ELECT FILM	220MF 0.1MF	20% 5%	25V 50V		IC201 IC301 IC302	8-759-240-11 8-759-207-73	IC TC4030BPHB IC TC4011BP IC TC4030BPHB		
C529 C530		ELECT FILM FILM	10MF 0.1MF 0.0033MF	20% 20% 10%	50V 250V 200V				IC HD14538BP IC HD14538BP		
C532	1-108-626-11		0.01MF	10%	100V		IC401 IC501 IC502	8-759-909-70	IC LA7830 IC UPC1377C IC CX23025		
		NECTOR>					IC503	8-749-931-22	IC S13122V		
CN202 x	k9-905-674-01 k9-905-673-01	CONNECTOR 6P						<vib< td=""><td>RATOR&gt;</td><td></td></vib<>	RATOR>		
CN203 × CN301 × CN302 ×	\$9-905-672-01 \$9-905-673-01 \$9-905-674-01	CONNECTOR 5P CONNECTOR 6P CONNECTOR 8P					L201 L202		CERAMIC TRAP 4.43MHz VIBRATOR CERAMIC 3.58MHz		
CN303 *9-905-670-01 CONNECTOR 2P CN401 *9-905-676-01 CONNECTOR 2P L							<c0i< td=""><td>L&gt;</td><td></td></c0i<>	L>			
CN502 *	k9-905-671-01 k9-905-676-01 k9-905-671-01	CONNECTOR 2P	L				L203 L204	1-408-421-00 1-408-402-00	INDUCTOR 100UH INDUCTOR 2.7UH		
<diode></diode>					L205 L206 L207	1-408-411-00 1-408-411-00 1-408-417-00	INDUCTOR 15UH INDUCTOR 15UH INDUCTOR 47UH				
D201	8-719-921-63	DIODE MTZJ-7.	. 5B				L208	1-408-411-00	INDUCTOR 15UH		
D202 D203	8-719-200-02	DIODE 10E2 DIODE 10E2 DIODE FR105					L401 L501 L502	1-408-411-00 1-410-093-11 9-905-662-01	INDUCTOR 15UH INDUCTOR 33MMH INDUCTOR WIDTH COIL 34UH		
D205	8-719-911-19	DIODE 1SS119					L503	9-905-663-01	INDUCTOR H-WIDTH COIL 34UH		
D207 D208	8-719-911-19	DIODE 1SS119 DIODE 1SS119 DIODE 1SS119					L504 L505	1-410-668-11	INDUCTOR HLC 80UH INDUCTOR 27UH		
	8-719-911-19 8-719-911-19						<transistor></transistor>				
		DIODE 1SS119 DIODE 1SS119					Q201 Q202	8-729-281-53 8-729-173-38	TRANSISTOR 2SC1815-GR TRANSISTOR 2SA733-K		
D305 D307	8-719-911-19 8-719-911-19	DIODE 1SS119 DIODE 1SS119 DIODE 1SS119					Q203 Q204 Q205	8-729-900-36 8-729-900-36 8-729-281-53	TRANSISTOR DTC124ES TRANSISTOR DTC124ES TRANSISTOR 2SC1815-GR		
D309	8-719-911-19	DIODE 1SS119					Q206	8-729-281-53	TRANSISTOR 2SC1815-GR		
D310 D311	8-719-911-19	DIODE 1SS119 DIODE 1SS119					Q207 Q208	8-729-281-53 8-729-281-53	TRANSISTOR 2SC1815-GR TRANSISTOR 2SC1815-GR		
D312 D313	8-719-911-19 8-719-911-19	DIODE 1SS119 DIODE 1SS119					Q209 Q210	8-729-281-53 8-729-281-53	TRANSISTOR 2SC1815-GR TRANSISTOR 2SC1815-GR		
D315	8-719-911-19	DIODE 1SS119 DIODE 1SS119					Q211 Q212	8-729-281-53 8-729-281-53	TRANSISTOR 2SC1815-GR TRANSISTOR 2SC1815-GR		
D401	8-719-911-19 8-719-911-19 8-719-911-19	DIODE 1SS119 DIODE 1SS119 DIODE 1SS119					Q213 Q214	9-885-007-63 8-729-281-53	TRANSISTOR KTC3229 TRANSISTOR 2SC1815-GR		
	8-719-911-19 8-719-200-02	DIODE 1SS119 DIODE 10E2									
D501	8-719-911-19	DIODE 1SS119 DIODE RD5. 6ES	SB2								



REF. NO.	PART NO.	DESCRIPTION				REMARK	REF. NO.	PART NO.	<u>DESCRIPTION</u>				REMARK
Q215 Q216	8-729-281-53 8-729-281-53	TRANSISTOR 2S	C1815-C	SR SR			R237 R238 R239 R240	1-249-429-11 1-249-441-11 1-249-429-11	CARBON CARBON	10K 100K 10K 10K	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W	
Q217 Q218 Q219 Q220	8-729-281-53 8-729-173-38 8-729-900-65 8-729-900-36	TRANSISTOR 2S TRANSISTOR DT TRANSISTOR DT TRANSISTOR DT	SA733-K SA144ES	ın			R241 R242 R243	1-249-429-11 1-249-429-11 1-249-437-11 1-247-897-11		10K 10K 47K 560K	5% 5% 5%	1/4W 1/4W 1/4W	
Q221 Q222 Q301 Q302	8-729-281-53 8-729-900-36 8-729-900-65 8-729-900-65	TRANSISTOR 2S TRANSISTOR DT TRANSISTOR DT TRANSISTOR DT	C124ES A144ES	GR			R244 R244 R245	1-249-428-11 1-249-417-11 1-249-413-11	CARBON CARBON	8. 2K 1K 470	5% 5% 5%	1/4W 1/4W 1/4W	
Q303 Q304 Q305	8-729-900-36 8-729-900-65 8-729-900-36	TRANSISTOR DT TRANSISTOR DT TRANSISTOR DT	C124ES A144ES				R247 R248 R249 R250	1-249-418-11 1-249-416-11 1-247-843-31 1-249-429-11	CARBON CARBON	1. 2K 820 3. 3K 10K	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W	
Q306 Q401 Q402	8-729-900-65 8-729-900-65 8-729-900-36	TRANSISTOR DT TRANSISTOR DT TRANSISTOR DT	A144ES A144ES				R251 R252 R253	1-249-429-11 1-249-421-11 1-247-847-31		10K 2. 2K 4. 7K	5% 5% 5%	1/4W 1/4W 1/4W	
Q403 Q404 Q405 Q501	8-729-900-36 8-729-900-36 8-729-900-36 8-729-900-36	TRANSISTOR DT TRANSISTOR DT TRANSISTOR DT TRANSISTOR DT	C124ES C124ES				R254 R255 R256	1-249-419-00 1-249-408-11	CARBON CARBON	1.5K 180	5% 5% 5%	1/4W 1/4W 1/4W	
Q502 Q503	8-729-900-36 8-729-111-55	TRANSISTOR DT	C124ES D1312-K				R257 R258 R259	1-249-413-11	CARBON CARBON CARBON	100 1K 270 470	5% 5% 5%	1/4W 1/4W 1/4W	
Q504 Q505	9-995-367-01	TRANSISTOR 2S TRANSISTOR BU		<b>L</b>			R260 R301 R302	1-247-903-11 1-249-430-11 1-247-847-31 1-249-433-11		1M 12K 4.7K	5% 5% 5%	1/4W 1/4W 1/4W	
R201	<res 1-249-429-11</res 	ISTOR>	10K	5%	1/4W		R303 R304 R305	1-249-433-11 1-249-411-11 1-249-429-11	CARBON	22K 330 10K	5% 5% 5%	1/4W 1/4W 1/4W	
R202 R203	1-249-431-11 1-249-415-11	CARBON CARBON CARBON	15K 680 270 6.8K	5% 5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W		R306 R307 R308	1-249-441-11 1-249-422-11 1-249-430-11	CARBON CARBON CARBON	100K 2.7K 12K	5% 5% 5%	1/4W 1/4W 1/4W	
R206 R207	1-249-409-11 1-249-410-11	CARBON	220 270	5% 5%	1/4W 1/4W		R309 R310	1-249-417-11 1-249-430-11		1K 12K	5% 5%	1/4W 1/4W	
R208 R209 R210		CARBON CARBON CARBON	470 100 22K	5% 5% 5%	1/4W 1/4W 1/4W		R311 R312 R313 R314	1-249-429-11 1-249-429-11 1-249-441-11 1-249-429-11	CARBON CARBON CARBON CARBON	10K 10K 100K 10K	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W	
R211 R212 R213 R214	1-249-411-11 1-249-417-11 1-249-417-11 1-249-420-11	CARBON CARBON	330 1K 1K 1.8K	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W		R315 R316 R317	1-249-417-11	CARBON CARBON	1K 68K 4.7K	5% 5% 5%	1/4W 1/4W 1/4W	
R215 R216	1-249-428-11 1-249-426-11		8. 2K 5. 6K	5% 5%	1/4W 1/4W		R318 R319 R320	1-249-417-11 1-249-439-11 1-247-847-31	CARBON CARBON CARBON	1K 68K 4.7K	5% 5%	1/4W 1/4W 1/4W	
R217 R218 R219 R220	1-249-417-11 1-249-405-11 1-249-417-11 1-249-414-11	CARBON CARBON CARBON CARBON	1K 100 1K 560	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W		R321 R322 R323	1-249-417-11 1-249-417-11	CARBON CARBON CARBON	1K 1K 1K 68K	5% 5% 5% 5%	1/4W 1/4W 1/4W	
R221 R222	1-249-401-11 1-216-482-11	CARBON METAL OXIDE	47 1.8K	5% 5%	1/4W 3W		R324 R325	1-249-439-11 1-247-843-31 1-247-847-31	CARBON CARBON	3. 3K 4. 7K	5% 5%	1/4W 1/4W	
R223 R224 R225	1-247-891-00 1-249-405-11 1-247-841-11	CARBON CARBON CARBON	330K 100 2.7K	5% 5% 5%	1/4W 1/4W 1/4W		R326 R327 R328 R329	1-249-429-11 1-249-429-11 1-249-429-11 1-249-429-11	CARBON CARBON CARBON CARBON	10K 10K 10K 10K	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W	
R226 R227 R228 R229	1-249-430-11	CARBON CARBON CARBON CARBON	120 1K 12K	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W		R330 R331 R332	1-249-419-11 1-249-429-11	CARBON CARBON CARBON	1.5K 10K	5% 5%	1/4W 1/4W	
R230 R231	1-249-420-11 1-249-429-11	CARBON CARBON	680 1.8K 10K	5% 5%	1/4W 1/4W		R333 R334 R401	1-249-426-11 1-249-426-11 1-247-847-31 1-249-435-11	CARBON CARBON CARBON	5.6K 5.6K 4.7K 33K	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W	
R232 R233 R234 R235	1-249-429-11 1-247-429-11 1-249-433-11 1-249-409-11	CARBON CARBON CARBON CARBON	10K 10K 22K 220	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W		R402 R403 R404	1-249-433-11 1-249-428-11 1-249-422-11	CARBON CARBON CARBON	22K 8. 2K 2. 7K	5% 5% 5%	1/4W 1/4W 1/4W	
R236			10K	5%	1/4W		R405 R406	1-249-437-11 1-249-422-11	CARBON CARBON	47K 2.7K	5% 5%	1/4W 1/4W	

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Replace only with part number specified.









portant i	e numero s	pecine.	nun	iber sp	ecilled.								
REF. NO. PAR	T NO.	DESCRIPTION				REMARK	REF. NO.	PART NO.	DESCRIPTION				REMARK
R408 1-2 R409 1-2 R410 1-2	49-435-11 47-881-00 49-433-11 49-419-11 47-886-11	CARBON CARBON	33K 120K 22K 1.5K 200K	5% 5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W 1/4W			*9-905-690-01	C BOARD ******				
R413 1-2 R414 1-2 R415 1-2	49-438-11 49-428-11 47-733-11 47-711-11 49-430-11	CARBON CARBON	56K 8.2K 33 680 12K	5% 5% 5% 5% 5%	1/4W 1/4W 1/2W 1/4W 1/4W		C701 C702 C703 C704	1-106-399-00 1-130-710-00 1-129-720-00 1-129-720-00	FILM FILM	0. 22MF 0. 1MF 0. 033M 0. 033M	<b>I</b> F	10% 20% 10% 10%	200V 250V 630V 630V
R417 1-2	47-843-31	CARBON	3. 3K	5%	1/4W			<res< td=""><td>ISTOR&gt;</td><td></td><td></td><td></td><td></td></res<>	ISTOR>				
R419 1-2 R420 1-2	49-408-11 16-357-00 49-419-11 49-409-11	METAL OXIDE	180 4.7 1.5K 220	5% 5% 5% 5%	1/4W 1W 1/4W 1/4W		R701 R702 R703 R704	1-249-496-11 1-247-752-11 1-247-760-11 1-247-760-11	CARBON CARBON CARBON CARBON	100K 1K 4.7K 4.7K	5% 5% 5% 5%	1/2W 1/2W 1/2W 1/2W	
R501 1-2 R502 1-2	49-435-11 47-889-00	CARBON CARBON	33K 270K	5% 5%	1/4W 1/4W		R705	1-247-893-11	CARBON	390K	5%	1/4W	
R503 1-2 R504 1-2 R505 1-2	49-430-11 49-440-11 49-427-11	CARBON CARBON CARBON	12K 82K 6.8K	5% 5% 5%	1/4W 1/4W 1/4W		R706 R707 R708	1-247-760-11 1-247-903-11 1-246-541-00	CARBON CARBON CARBON	4.7K 1M 680K	5% 5% 5%	1/2W 1/4W 1/4W (PVM-9	6/96E ONLY)
R507 1-2	49-435-11 49-417-11	CARBON	33K 1K	5% 5%	1/4W 1/4W		R708	1-249-437-11	CARBON	47K	5%	1/4₩	(1 ACD ONLY)
R508 A R509 A R510 1-2	49-440-11	CARBON CARBON CARBON	82K	5% 5% 5%	1/4W 1/4W 1/4W		R710	1-249-424-11	CARBON	3. 9K	5%	(PVM-136 1/4₩	/146E ONLY)
	49-422-11 49-426-11	CARBON CARBON	2.7K 5.6K	5% 5%	1/2W 1/4W			<var< td=""><td>IABLE RESISTOR</td><td>?&gt;</td><td></td><td></td><td></td></var<>	IABLE RESISTOR	?>			
R513 1-2 R514 1-2	47-889-00 49-437-11 49-405-11	CARBON CARBON CARBON	270K 47K 100	5% 5% 5%	1/4W 1/4W 1/4W		RV701 RV702	9-905-689-01 9-905-688-01	RES, ADJ 2M RES, ADJ 1M				
R516 1-2 R517 1-2	49-437-11 47-754-11	CARBON CARBON	47K 1.5K	5% 5%	1/4W 1/2W			<spa< td=""><td>RK GAP&gt;</td><td></td><td></td><td></td><td></td></spa<>	RK GAP>				
R518 1-2	47-688-11 49-431-11		10 15K	5% 5%	1/4W 1/4W		SG701	1-519-422-11	GAP, SPARK 1	ζ			
R521 1-2	49-388-11	CARBON	3. 9	5%	1/4W		*****	*****	******	*****	****	******	*****
R523 1-2 R524 1-2 R525 1-2	47-740-11 16-349-00 47-688-11 16-349-00	CARBON METAL OXIDE CARBON METAL OXIDE	120 1 10 1	5% 5% 5% 5%	1W 1W 1/4W 1W			*9-905-698-01	*****				
R526 1-2	49-417-11	CARBON	1K	5%	1/4W		ON OO 1		NECTOR>				
DV001 1 0		IABLE RESISTOR						9-905-697-01 9-905-697-01					
RV301 1-2 RV302 1-2	28-997-00	RES, ADJ, CARI RES, ADJ, CARI RES, ADJ, CARI	BON 100	K				<fus:< td=""><td>E&gt;</td><td></td><td></td><td></td><td></td></fus:<>	E>				
RV401 1-2 RV402 1-2	28-989-00	RES, ADJ, CAR	BON 47K BON 470					<u>1-532-745-11</u> <u>1-576-230-41</u>				(PVM-9	6/136 ONLY) /146E ONLY)
RV404 1-2		RES, ADJ, CARI	BON 1K	K				CWI	TCUS				
RV501 1-2	28-990-00 28-993-00 28-995-00	RES, ADJ, CARI RES, ADJ, CARI RES, ADJ, CARI	BON 4.7				SW901	<swi 1-571-433-12</swi 		(AC POW	ER)		
	<rel< td=""><td>A V \</td><td></td><td></td><td></td><td></td><td>*****</td><td>*****</td><td>******</td><td>*****</td><td>****</td><td>*****</td><td>*****</td></rel<>	A V \					*****	*****	******	*****	****	*****	*****
RY501 9-9								*9-905-683-01	G BOARD, COMF				
	<tra< td=""><td>NSFORMER&gt;</td><td></td><td></td><td></td><td></td><td></td><td><cap.< td=""><td>ACITOR&gt;</td><td></td><td></td><td></td><td></td></cap.<></td></tra<>	NSFORMER>						<cap.< td=""><td>ACITOR&gt;</td><td></td><td></td><td></td><td></td></cap.<>	ACITOR>				
		TRANSFORMER HI		VR&CV			C501 C502	1-130-487-00 1-124-464-11		0.022MF 0.22MF			100V 50V
		************			******	*****	C502 C503 C504	1-124-464-11 1-102-981-00 1-106-375-12	CERAMIC	300PF 0.022MF		5%	50V 50V 100V

The components identified by 

in this manual
have been carefully factory-selected for each
set in order to satisfy regulations regarding
X-ray radiation. Should replacement be
required, replace only with the value originally
used.





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REF. NO.	PART NO.	DESCRIPTION					REMARK	REF. NO.	PART NO.	DESCRIPTION		************		REMARK
C505	1-106-375-12	FILM	0. 022MF	ŗ	10%	100V		R602	1-216-411-11	CEMENT	1.5	5%	5₩	F
C506 C601 C602 C603 C604	1-106-375-12 1-136-185-00 1-136-185-00 1-161-973-00 1-161-973-00	FILM FILM FILM CERAMIC CERAMIC	0. 022MF 0. 22MF 0. 22MF 220PF 220PF		10% 20% 20% 10% 10%	100V 250V 250V 400V 400V		R603 R604 R605 R606 R607 R608	1-215-904-11 1-215-904-11 1-212-865-00 1-249-404-00 1-260-128-91 1-260-128-91	METAL OXIDE  METAL OXIDE FUSIBLE CARBON CARBON CARBON	100K 100K 22 82 270K 270K	5% 5% 5% 5% 5%	2W 1/4W 1/4W 1/4W 1/4W	
C605 C608 C609 C610 C611	1-161-973-00 1-162-599-12 1-162-599-12 1-125-724-11 1-136-206-21	CERAMIC CERAMIC CERAMIC ELECT FILM	220PF 4700PF 4700PF 180MF 0.033MF		10% 20% 20% 20% 20% 10%	400V 400V 400V 400V 630V		R609 R610 R611 R612 R613	1-215-904-11 1-216-341-11 1-249-396-11 1-249-399-11 1-215-904-11	METAL OXIDE WIREWOUND CARBON CARBON METAL OXIDE	100K 0. 22 18 33 100K	5% 10% 5% 5%	2W 3W 1/4W 1/4W 2W	
C612 C613 C614 C651 C652	1-126-803-11 1-108-642-11 1-108-642-11 1-161-925-00 1-124-922-11	ELECT FILM FILM CERAMIC ELECT	47MF 0. 22MF 0. 22MF 100PF 1000MF		20% 10% 10% 10% 20%	50V 100V 100V 500V 50V	•	R651 R652 R653 R654 R655	1-215-886-11 1-215-886-11 1-260-107-11 1-260-107-11 1-249-435-11	METAL OXIDE METAL OXIDE CARBON CARBON CARBON	100 100 4. 7K 4. 7K 33K	5% 5% 5% 5%	2W 2W 1/4W 1/4W 1/4W	
C653 C654	1-124-920-11 1-130-483-00		330MF 0.01MF		20% 5%	50V 100V		R656	1-249-433-11	CARBON	22K 2. 7K	5% 5%	1/4W 1/4W	
	<con< td=""><td>NECTOR&gt;</td><td></td><td></td><td></td><td></td><td></td><td>R657 R658 R666</td><td>1-249-422-11 1-249-423-11 1-218-265-11</td><td>CARBON CARBON METAL OXIDE</td><td>3. 3K 8. 2M</td><td>5% 5% 5%</td><td>1/4W 1/4W 1W</td><td></td></con<>	NECTOR>						R657 R658 R666	1-249-422-11 1-249-423-11 1-218-265-11	CARBON CARBON METAL OXIDE	3. 3K 8. 2M	5% 5% 5%	1/4W 1/4W 1W	
	*1-560-436-00 *1-564-518-11								<var< td=""><td>HABLE RESISTO</td><td>?&gt;</td><td></td><td></td><td></td></var<>	HABLE RESISTO	?>			
	<di0< td=""><td>DE&gt;</td><td></td><td></td><td></td><td></td><td></td><td><b>⊠</b>RV651 <u>/</u></td><td>1-228-744-11</td><td>RES, ADJ, CAI</td><td>RBON 470</td><td>)</td><td></td><td></td></di0<>	DE>						<b>⊠</b> RV651 <u>/</u>	1-228-744-11	RES, ADJ, CAI	RBON 470	)		
D601 D602	8-719-911-19 8-719-911-19								<tra< td=""><td>NSFORMER&gt;</td><td></td><td></td><td></td><td></td></tra<>	NSFORMER>				
D603 D604	8-719-970-87 8-719-970-87	DIODE ERA38- DIODE ERA38-	06					T601		TRANSFORMER,				
D605 8-719-110-53 DIODE RD20ESB2 D651 8-719-971-08 DIODE ESAC39M-06C								********** *9-905-708-01			****	*****	*****	
	<ic></ic>									*******	*****			
	8-759-637-30	IC M51978								'ACITOR>				
IC651	8-759-908-15							C670 C671 C672	1-102-973-00 1-124-910-11 1-123-382-00 1-124-927-11	ELECT	100PF 47MF 3.3MF		10% 20% 20%	100V 50V 50V
L601	<coi 9-905-681-01</coi 							C673	1-124-921-11	ELECI	4. 7MF		20%	50V
L602 L651	9-905-679-01 1-424-255-11	COIL, CHOKE	LFT 13MM 10UH	1H						NECTOR>				
L652	9-905-681-01	LFT 100UH						CN601	*1-564-521-11	CONNECTOR 6P				
		TO SENSOR>							<dio< td=""><td></td><td></td><td></td><td></td><td></td></dio<>					
PH601 <u>/</u>	\8-719-159-90			3) e-7 e4				D670 D671 D672		DIODE RD15ESI DIODE 1SS119 DIODE 1SS119	32			
Q601	<tra 8-729-322-18</tra 	NSISTOR> TRANSISTOR 2	SK1402A						<tra< td=""><td>NSISTOR&gt;</td><td></td><td></td><td></td><td></td></tra<>	NSISTOR>				
•								Q670	8-729-304-06	TRANSISTOR 25	SA1488-C	)		
R501	1-249-441-11		100K	5%	1/4W			Q671 Q672 Q673	8-729-173-38 8-729-281-53 8-729-281-53	TRANSISTOR 23 TRANSISTOR 23 TRANSISTOR 23	SC1815-0 SC1815-0	R		
R502 R503 R504 R505	1-249-417-11 1-249-433-11 1-247-887-00 1-249-433-11	CARBON CARBON	1K 22K 220K 22K	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W			Q674 Q675	8-729-281-53 8-729-281-53	TRANSISTOR 25				
R506	1-249-433-11		22K 18K	5%	1/4W				<res< td=""><td>ISTOR&gt;</td><td></td><td></td><td></td><td></td></res<>	ISTOR>				
R507 R601	1-249-397-11 1-216-411-11	CARBON	22 1. 5	5% 5%	1/6W 5W		F	R670	1-247-700-11		100	5%	1/4W	F

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REF. NO. PART NO.	DESCRIPTION		·	·	REMARK	REF. NO.	PART NO.	DESCRIPTION				REMARK
R671 1-249-399-1		33 10K	5%	1/4W			<cap.< td=""><td>ACITOR&gt;</td><td></td><td></td><td></td><td></td></cap.<>	ACITOR>				
R672 1-247-855-1 R673 1-249-417-1 R674 1-249-417-1	L CARBON CARBON	10K 1K 1K	5% 5% 5%	1/4W 1/4W 1/4W		C102	1-126-964-11 1-126-233-11	ELECT	10MF 22MF	20% 20%	16V 16V	
R675 1-249-425-1 R676 1-249-425-1	CARBON	4. 7K 4. 7K	5% 5%	1/4W 1/4W		C103 C104	1-101-004-00 1-126-233-11 1-126-233-11	CERAMIC ELECT	0.01MF 22MF 22MF	20% 20%	50V 16V 16V	
R677 1-247-897-1 R678 1-249-459-1 R679 1-249-425-1	L CARBON L CARBON	560K 12K 4.7K	5% 5% 5%	1/4W 1/4W 1/4W			1-126-233-11 1-101-004-00 1-126-233-11		22MF 0.01MF	20%	16V 50V	
R680 1-249-423-1	CARBON	3.3K 560	5% 5%	1/4W 1/4W		L C109	1-126-233-11 1-126-233-11 1-126-964-11	ELECT	22MF 22MF 10MF	20% 20% 20%	16V 16V 16V	
R681 1-249-414-1 R682 1-247-891-0 R683 1-249-433-1 R684 1-249-432-1	L CARBON	330K 22K 18K	5% 5% 5%	1/4W 1/4W 1/4W		C111 C112	1-126-964-11 1-101-004-00 1-126-233-11	ELECT CERAMIC	10MF 0.01MF	20%	16V 50V	
R685 1-247-855-1 R686 1-249-441-1	L CARBON	10K 100K	5% 5%	1/4W 1/4W		L C114	1-126-233-11 1-126-233-11 1-126-233-11	ELECT	22MF 22MF 22MF	20% 20% 20%	16V 16V 16V	
R687 1-249-427-1 R688 1-249-420-1	L CARBON L CARBON	6.8K 1.8K	5% 5%	1/4W 1/4W		C117 C118 C119	1-101-004-00 1-126-233-11 1-126-964-11	CERAMIC ELECT	0.01MF 22MF 10MF	20% 20%	50V 16V 16V	
	ARIABLE RESISTO		717			C120	1-126-964-11 1-124-464-11 1-126-233-11	ELECT	0. 22 0. 01MF	20% 20% 20%	50V 50V	
RV670 1-249-425-1 ***********				*****	*****	C122 C123	1-124-233-11 1-126-964-11 1-124-251-11	ELECT ELECT	22MF 10MF	20% 20%	16V 16V 50V	
*9-905-695-0	H BOARD					C124 C125 C126	1-124-251-11 1-102-125-00 1-124-464-51	CERAMIC ELECT	0.22MF 0.0047MF 0.22MF	20% 10% 20%	50V 50V 50V	
<d< td=""><td>(ODE&gt;</td><td></td><td></td><td></td><td></td><td>C127 C128 C129</td><td>1-126-157-11 1-126-157-11 1-108-812-11</td><td>ELECT ELECT</td><td>10MF 10MF 0.047MF</td><td>20% 20% 5%</td><td>16V 16V 50V</td><td></td></d<>	(ODE>					C127 C128 C129	1-126-157-11 1-126-157-11 1-108-812-11	ELECT ELECT	10MF 10MF 0.047MF	20% 20% 5%	16V 16V 50V	
D801 9-996-328-0	DIODE KLG124	E				l C130	1-108-812-11 1-124-120-11 1-124-120-11	ELECT	220MF 220MF	20% 20%	16V 16V	
<r< td=""><td>ESISTOR&gt;</td><td></td><td></td><td></td><td></td><td>C132 C133</td><td>1-124-120-11 1-124-910-11 1-126-969-11</td><td>ELECT ELECT</td><td>220MF 47MF</td><td>20% 20%</td><td>16V 50V</td><td></td></r<>	ESISTOR>					C132 C133	1-124-120-11 1-124-910-11 1-126-969-11	ELECT ELECT	220MF 47MF	20% 20%	16V 50V	
R801 1-249-419-1 R802 1-249-431-1 R803 1-249-433-1 R804 1-249-432-1	I CARBON	15K 5 22K 5	5% ] 5% ]	1/6W 1/4W 1/6W		C134 C135 C136	1-126-969-11 1-124-464-11 1-126-964-11	ELECT ELECT ELECT	220MF 0.22MF 10MF	20% 20% 20%	25V 50V 50V	
R804 1-249-432-1 R805 1-249-433-1	L CARBON L CARBON	18K 5 22K 5	5% ] 5% ]	1/4W 1/4W		C137 C138	1-101-004-00 1-101-004-00	CERAMIC CERAMIC	0.01MF 0.01MF	2004	50V 50V	
<γ	ARIABLE RESISTO	R>				C139 C144	1-126-964-11 1-126-964-11	ELECT	10MF 10MF	20% 20%	50V 16V	
RV801 9-905-693-0 RV802 9-905-691-0	l 500B						<con< td=""><td>NECTOR&gt;</td><td></td><td></td><td></td><td></td></con<>	NECTOR>				
RV803 9-905-694-0 RV804 9-905-693-0 RV805 9-905-693-0	1 20K					CN102	*9-905-675-01 *9-905-673-01	CONNECTOR 6F	)			
<b>&lt;</b> S	WITCH>					CN104	*9-905-671-01 *9-905-670-01 *9-905-697-01	CONNECTOR 2F				
SW801 1-554-419-0 SW802 1-554-419-0	) SWITCH, PUSH	(1 KEY)	)			CN106	*9-905-671-01	CONNECTOR 3F	,			
SW803 1-554-419-0 SW804 1-554-419-0 SW805 1-554-419-0	) SWITCH, PUSH	(1 KEY)	)				<dio< td=""><td>DE&gt;</td><td></td><td></td><td></td><td></td></dio<>	DE>				
SW806 1-554-419-0						D106 D107 D111	8-719-911-19 8-719-911-19 8-719-911-19	DIODE 1SS119 DIODE 1SS119 DIODE 1SS119	)			
******	******	*****	*****	******	*****	D112 D113	8-719-911-19 8-719-911-19	DIODE 1SS119 DIODE 1SS119	)			
*9-904-707-0	Q BOARD, COM ********					D114 D115	8-719-911-19 8-719-911-19	DIODE 1SS119 DIODE 1SS119	)			
*9-905-687-0 <u>↑</u> 1-560-222-2	1 TERMINAL ASS 1 INLET, AC	Y, INPU	T OUTPI	UT		D116 D117 D118	8-719-911-19 8-719-911-19 8-719-911-19	DIODE 1SS119 DIODE 1SS119 DIODE 1SS119	)			
						D119	8-719-911-19	DIODE 188119	)			





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REF. NO.	PART NO.	DESCRIPTION				REMARK	REF. NO.	PART NO.	DESCRIPTION				REMARK
D120 D121 D122 D123	8-719-911-19	DIODE 1SS119 DIODE 1SS119 DIODE 1SS119 DIODE 1SS119					R138 R139 R140 R141	$\begin{array}{c} 1-247-887-00 \\ 1-249-405-11 \\ 1-247-897-11 \\ 1-249-431-11 \end{array}$	CARBON CARBON	220K 100 560K 15K	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W	
D124 D125 D126 D127	8-719-911-19 8-719-150-56 8-719-911-19 8-719-109-89	DIODE RD12EB2 DIODE 1SS119					R142 R143 R144 R145 R146	$\begin{array}{c} 1-249-441-11 \\ 1-214-921-00 \\ 1-249-405-11 \\ 1-249-421-11 \\ 1-247-855-11 \end{array}$	CARBON CARBON CARBON	100K 220K 100 2.2K 10K	5% 5% 5% 5% 5%	1/4W 1/2W 1/4W 1/4W 1/4W	
	<ic></ic>						R147	1-249-435-11	CARBON	33K	5%	1/4W	
IC102 IC103	8-759-800-81 8-759-800-81 8-759-800-81 8-759-420-04	IC LA7016 IC LA7016					R148 R149 R150 R151	1-247-711-11 1-249-389-11 1-249-435-11 1-249-433-11	CARBON CARBON CARBON CARBON	680 4.7 33K 22K	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W	
	<tran< td=""><td>NSISTOR&gt;</td><td></td><td></td><td></td><td></td><td>R152 R153 R154</td><td>1-249-424-11 1-249-393-11 1-249-389-11</td><td>CARBON CARBON CARBON</td><td>3.9K 10 4.7</td><td>5% 5% 5%</td><td>1/4W 1/4W 1/4W</td><td></td></tran<>	NSISTOR>					R152 R153 R154	1-249-424-11 1-249-393-11 1-249-389-11	CARBON CARBON CARBON	3.9K 10 4.7	5% 5% 5%	1/4W 1/4W 1/4W	
Q101	8-729-281-53	TRANSISTOR 2S	C1815-C	GR.			R155 R156	1-249-417-11 1-249-409-11	CARBON CARBON	1K 220	5% 5%	1/4W 1/4W	
Q102 Q103 Q106 Q107	8-729-281-53 8-729-173-38	TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S	SC1815-0 SA733-K	iR iR			R157 R158 R159	1-249-439-11 1-249-439-11 1-249-441-11	CARBON CARBON	68K 68K 100K	5% 5% 5%	1/4W 1/4W 1/4W	
Q108 Q109	8-729-173-38 8-729-281-53	TRANSISTOR 2S	C2235	:R			R160	1-249-426-11	CARBON *******	5.6K	5%	1/4W	<b>Ს</b>
4200			,01010 (	•••				9-905-696-01		****	*****	****	****
D101		STOR>		F0/	, (om				*****				
R102		CARBON CARBON	75 1K 68K	5% 5% 5%	1/6W 1/4W 1/4W			<di0< td=""><td>DE&gt;</td><td></td><td></td><td></td><td></td></di0<>	DE>				
R104	1-249-438-11	CARBON CARBON	56K 2. 2K	5% 5%	1/4W 1/4W		D001 D002	8-719-023-78 8-719-023-78	DIODE LED SEL DIODE LED SEL	3810DLC 3810DLC	05 05		
R106	1-249-411-11	CARBON	330	5%	1/4W		D003	8-719-023-78	DIODE LED SEL	3810DLC	05		
R108 R109	1-249-433-11	CARBON CARBON CARBON CARBON	100 22K 22K 100	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W		*****	******	************* MISCELLANEOUS ******	******	*****	******	*****
R112 R113 R114	1-249-439-11	CARBON CARBON CARBON CARBON CARBON	330 2. 2K 56K 68K 1K	5% 5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W 1/4W		F501 A F501 A	1-532-743-11	INLET, AC FUSE, TIME-LAG FUSE, GLASS TO	IBE 2A/	125V (	PVM-96/1	16E ONLY) 136 ONLY)
R117 R118 R119	1-249-439-11 1-249-433-11	CARBON CARBON CARBON CARBON CARBON	75 1K 68K 22K 22K	5% 5% 5% 5% 5%	1/6W 1/4W 1/4W 1/4W 1/4W		F901 A L901 A T502 A	1-576-230-41 9-905-699-01 9-905-666-01	FUSE, GLASS TO FUSE (H. B. C) O DEFLECTION YOU TRANSFORMER AS	Γ3.15Α/: ΚΕ SSY. FL	(250V (PV YBACK	(PVM-96/1 /M-96E/14	
R123 R124 R125	1-249-411-11 1-249-438-11 1-247-804-11	CARBON CARBON CARBON CARBON	12K 330 56K 75	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/6W		V901 <u>∧</u> V901 <u>∧</u>	9-905-701-01 9-905-703-01	PICTURE TUBE ( PICTURE TUBE (	C-9D01SI C-14D01S	WH1 (PV SWH1(PV	M-136/14	16E ONLY)
		CARBON	2. 2K	5% 5%	1/4W				ACCESSORIES & ********				
R128	1-249-437-11	CARBON CARBON CARBON	12K 47K 47K	5% 5% 5%	1/4W 1/4W 1/4W				<pvm-96 96e=""></pvm-96>				
R130	1-249-437-11	CARBON CARBON	47K 47K 47K	5% 5%	1/4W 1/4W		A	1-590-910-11	CORD, POWER 77 CORD SET, POWI HOLDER (A), PI	R 10A/2	250 <b>V</b>		6 ONLY) 6E ONLY)
R133	1-249-417-11	CARBON CARBON	1K 1K	5% 5%	1/4W 1/4W		*	2-990-242-01	HOLDER (B), PI HOLDER (B), PI	LUG			6 ONLY) 6E ONLY)
R135	1-249-437-11 1-247-897-11 1-249-431-11	CARBON CARBON CARBON	47K 560K 15K	5% 5% 5%	1/4W 1/4W		*	3-704-296-01	BAG, PROTECTION	ON .			
	1-249-441-11		100K	5% 5%	1/4W 1/4W			3-708-670-41	MANUAL, INSTRU MANUAL, INSTRU INDIVIDUAL CAR	JCTION		(PVM-9	6 ONLY) 6E ONLY) 6 ONLY)
						·						•	>

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REF. NO. PART NO.	DESCRIPTION	REMARK
*3-708-715-01	INDIVIDUAL CARTON	(PVM-96E ONLY)
*3-708-722-01 *3-708-723-01 *3-708-724-01 *3-708-725-01 1-690-871-11	CUSHION (LEFT UPPER) CUSHION (RIGHT LOWER) CUSHION (RIGHT UPPER) CUSHION (LEFT LOWER) REMOTE CONNECTOR (8-PIN MINI	DIN)
	<pvm-136 146e=""></pvm-136>	
$\frac{\Lambda}{1}$ -551-812-11 $\frac{\Lambda}{1}$ -590-910-11 *2-990-241-02 *2-990-242-01 *3-170-078-01	CORD, POWER 10A/250V HOLDER (A), PLUG HOLDER (B), PLUG	(PVM-136 ONLY) (PVM-146E ONLY) (PVM-136 ONLY) (PVM-146E ONLY)
*3-704-302-01 3-708-670-21 3-708-670-41 *3-708-718-01 *3-708-721-01	BAG, PROTECTION MANUAL, INSTRUCTION MANUAL, INSTRUCTION INDIVIDUAL CARTON	(PVM-136 ONLY) (PVM-146E ONLY) (PVM-136 ONLY) (PVM-146E ONLY)
*3-708-743-01 *3-708-744-01 *3-708-745-01 *3-708-753-01 *4-041-648-01	CUSHION (LEFT LOWER) CUSHION (RIGHT UPPER) CUSHION (RIGHT LOWER) CUSHION (LEFT UPPER) PLATE, TALLY	
1-690-871-11	REMOTE CONNECTOR (8-PIN MINI	DIN)